CIO Mea

ClOs outlast of



year, 40% of all hou PCs, and 62% of those

'net crunch escalating

By Kim Girard and Mitch Wagner

The Internet has experienced a noticeable slowdown over the past two weeks, and vexed users are pitching theories that range from overtaxed routers to a September surge in student use

'A dozen users and analysts rannet crunch, our 135

New rule tightens year 2000 noose

By Robert L. Scheier

If you're still trying to get funding to solve your year 2000 prob-lems, take an aspirin. Maybe two. It's had enough that you will be asking for money to solve a

problem that IS created by building or buying applications that and 21st centuries. Now a new acting rule makes it more likely that fixing the problem will hert

short-term earnings and anger Under the rule, edmossies must account for year 2000 expenses spreading out the costs over years.

when the work is done, rather than And this makes year 2000 work an even worse business proposition, said Jim Jones, managing director of The Information Management Forum, an Atlanta-based association of

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Year 2000, sare 135

Novell users hedge bets

Users will arrive at this week's Networld/Interco '96 in Atlanta amid a both contested battle for network operating system mind share. According to a Compo-

orld survey of 2,500 users, Novell, Inc.'s Net-Ware is still very much ers are eyeing other options. Many are at a crucial juncture. They

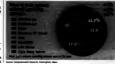
must decide whether to stick with sarket-leading NetWare, migrate to challenger Windows NT Server from Microsoft Corn, or attenut a

ual strategy. "We're all in the same boot — ustisfied with NetWare as a product but

med financial stability." said George Halkiss, a datab Halkiss, a database analyst at Johnston & Johnson Ethicon, Inc., a wholly

owned subsidiary of John-son & Johnson, Inc. in Somerville, N.I. The survey found that many Net-

Warf users feel the same. Sixty-six percent of those polled said they will stick with it. But nearly all of those interviewed said they are grown Novell users, page 16



56K modems on deck

Rockwell Semiconductor Systems is preparing a 56K bit/sec. modem chip set — today's top out at 33.6K bit/sec. — that analysts said will enable faster access to the Internet and corporate data networks from remote sites and mobile workers'

> Rockwell, which provides this sets to many modern makers, will demonstrate the technology in November at Coardes/Fall '96 in Vegas. Company officials wouldn't say when Rockwell will ship the chip set.

The high-speed chip set will enable modems to support data transmission over regular analog lines at 56% bit/sec. That will let users transmit and receive more data in less time, which would result in lower

WHAT'S INSIDE sites to prove a point. See story, page 6, by Mitch

The venerable Boston Com-puter Society folds. See stery page 7, by Matt Hamblen.

coverage, turn to pages 14.

NETWORLD HINTERSP 96 Tom and Cabletron score

well in a Computerworld user Cisco, Bay Networks and IBM draw lukewarm feedback in several areas. See Buyer's ide, starting on page 99

Web woes

yet again, he gritted his teeth and chanted in a low, desrate monotone, "God I hate PCs, God I hate PCs. Then he realized that the culprit was a failed network section instead of our familiar friend. General Protection Fault. He narrowed his eyes and tried to remember m to blame. Was it the network connectivity software wendor? The local Internet service provider? The phone company?

Welcome to the new world, same as the old world. The scene of this crime against successful product demonstrations was an Internet show aimed at electronic com-

merce, but it could have been any trade show in the past decade. There's a whole lot of rebooting going on. And a lot of IS professionals are smiling sagely. shaking their heads and moving on to the next booth to see the next World Wide Web Wonder.

Indeed, osers are weighing their options and gathering advice from colleagues who've been there, done that, They're also watching the recent spate of Internet service slowdowns (see sto-

ry, page 1) with a cautious eye. For those ready to force ahead with a Web site but unwilling to undertake the task on their own, our Marketplace section (page 122) offers some tips for evaluating Web outsourcers. Our In Depth section (page 105) features an IS contractor talking about

how to work with this new breed of outsourcer more effectively. But when an IS shop is finding its own way with Web technology, the core issue remains how to manage it. Check out Patrick Dryden's story about Web-based network management (page 57) and the approach used by David Brown, director of perwork services at The New York Times. Each morning, he gets a jump on diamoning a problem before it affects his evers by checking for emerging performance problems on his network - via a browser-equipped laptop in his bedroom. Then, during his morning commute, he figures out how to fix whatever's wrong.

Now that's service and reliability, real-world sevin Marries lokaton Fasculine editor Internet maryfran johnson@cu.com

The 5th Wave by Rich Tennant



Microsoft joins PDA market

By Mindy Blodgett

The drooping handheld computer market will get a boost this week when Microsoft Corp. unwrace Windows CE, its long-availed uperating system

Code-named Pegasus, Wipdows CE was designed to run on handheld computers and personal digital assistants (PDA). Windows CE will also work with devices such as smart phones and

Ion Marill, director of Microsoft consumer appliance marketvices that use Windows CE.

ing, said Windows CE will offer These include Compaq Computer Corp., Hewlett-Packard Co., NEC wireless electronic mail, Internet access and data synchro and communication with other Windows '95 and Windows NT

sumer Electronics Co., Casio Computer Co. and LG Electrondevices ice loc The PDA market needs Micro soft's presence. Only 480,000 provider in Lincolnshire, III., said handhelds were sold worldwide last week it is working with Motolast year, compared with 3.6 mil-lion notebooks in the U.S. rola, Inc. to develop wireless

modern cards that support Winaccording to Datament in San doors CF Inse Calif The devices are expected to be Sources said some third-party OEMs plan to build hardware de-

announced at Comdex/Fall '96 in ember and to cost between \$500 and \$1,000, sources said.

ogies, Inc., Philips Con-

Ardis Có., a wireless network

News Shorts

AlphaServers pumped

Digital Equipment Corp. is shipping the AlphaServer 4000.

a Windows NT system that re-

places the AlphaServer 2000. The

system features on to two 300, or

600-MHz Alpha processors and

up to 4G bytes

Tivoll, Intel cozy up Intel Corp. in Santa Clara, Calif., and IBM's Tivoli Systems, Inc. in Austin, Texas, are tightening

links between their exstems oroducts. They will for-

Intel's LANDesk LAN mana pair of scalable LAN switches. ment software with Throi Man-The switches provide a 1G bit/agement Environment (TME), sec. fat pipe, which gives overs acenterprise network management cess to high-speed servers for software, latel will integrate some data-intensive applications. The configuration and desiston man-GigaStar 100 costs \$200 per port. agreement franctions into TMF The larger GaraStar 2000 data ter switch costs \$15,000. Both PC price cuts continue will ship in late October.

Dell Computer Corp. and Com peg Computer Corp. cut prices again last week, reflecting a continuing drop in component costs Austin-based Dell dropped prices as much as 16% on its corporate desktop line, its fourth price cut this year. Houston-based Compan dropped prices by as much as 198 on its ProSignia and ProLian

server lines and as much as 29% on some memory, power supply and disk drive options for servers. IRS Cyberfile fails The Internal Revenue Service

last week therw in the towel on its troubled Cyberfile system for file ing tax returns over the Internet The U.S. General Accounting Office said the \$17.1 million proect was mismanaged, developed in violation of federal procure ment regulations and installed in an insecure facility

Java gets RAD tools Symantee Corp. will soon re-

lease an application development tool for visual Java development. Visual Cafe's entire edit/compile/ debug cycle is replaced by a rapid

application development (RAD) cil is posting the spec on its Web cycle. A preview version for Win-dows is svailable free and can be site (www.olapcouncil.org) start ing today for a 90-day comment downloaded at www. cafe.symanperiod. The final written specificatec.com. Visual Cafe will cost tion is due by December and could start showing up in commercial software products by 1G bit/sec. switches bow April 1997,

GigaLaba, Inc. in Sunnvyale. Calif. this week will announce of Coke to expand IS The Cocn-Coin Co. is launching

s multimilion-dollar expansio and upgrade of its management information system over the next five to serve years. The Atlanta soft drink giant will get help from Ernst & Young for consulting services. It picked SAP AG for softwater implymen

Panix attack

vider came under attack last week by an unknown hacker. Public Access Network Corp., or Pa-nix, has been beseiged since Sept. 6 by a barrage of "mail bombs," es sent every few sec the firm's mail, news and Work Wide Web servers that overload the system. The only way to stop such attacks is to shut down a ser vice shopether or enlist the belo of laternet service providers around the country to track down

SHORT TAKES Statistical software maker SPSS, Inc. has agreed to buy flowchert software developer Clear Software, Inc. for \$4.5 mil-lion.... O'Reilly & Associates, Inc. in Sebastapol, Calif., plans to bundle its, WebSite World Wide Web server with Corel, Inc.'s Web.Graphics suite of develop ment tools for \$299.... Novell. Inc. will begin shipping its E-mail ungrade. GroupWise 5.0. next

A New York Internet service pro-

of memory. the prodset, which is aimed at high-capacity data merts, online transaction processing, enterprise electronic-mail and networking the seconmons backer uses, start at \$34,500 for a single

bytes of memory and 4.3G bytes interoperability sought The Boston-based OLAP Co cil is releasing the first interoperability standard to give companies with a mixed environment the

processor system with 128

of hard disk space.

shility to easily access and manage data among different prod octs. OLAP software was designed for fast analysis of month with the same pricing as multidimensional data. The coun-GroupWise 4.1.



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Inside Computerworld

Sept. 16, 1996

News

NEWS Electronic commerce

nehr firms will have to link they inside and outside networks.

Performance boost announce a full-fledged 64-bit Unix server in mid-1007.

Microsoft Exchange the vendor is enhancing its E-mailengine with enterprise

OPINION Career isn't Over

CIOs are survivors, Paul Gillin saws. Digital cash? nert cards won't catch on

because they can't handle routine-transactions such as giving the kids milk money insensist Mirhael Cohn warns Desktop video

Finally, desktop videoconfer encing is cheap enough for corporate America, Kathryn Korostoff says.

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Netscape/Novell? Rumors notwithstanding, Net scape would be crazy to buy Nevell, David Coursey says.

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Free-where?

IS has smalthed freeware for building Web sites - but it's a custly such www.computerworld.com

Will IBM's newest minimaintrame appraiste anyone outside Hir Blue's statled has

QuickPoll: The usefulness of user groups The death of the venerable Boston

Lamouter Society rases the ones tion: Does anyone get anything out of user groups anymore www.computerworld.com/forums.

www.computerworld.com

Choice Cuts

Scottsdale, Arizona's pioneering use of its geographic information system has really paid off

in additional revenue and cost savings. Corporate Strategies,





Iam A man who's

been there has advice for contractors and those who hire them.

Technical Sections SERVERS & PCs

Storage standards wa emerging storage technol ogies promise to increase band width and connectivity

Network computing As network computers begin to hit the market, managers evaluate the systems.

SOFTWARE Loves me, loves me not

Differentiating wendors' inneterm partnerships from market ing romances can make or break an IS manager's career

on 'netting the software Managers look to Internet based financial and account in esoftware to simplify cus

.THE ENTERPRISE NETWORK Web-based management The Web has already changed the way some administrators manage their networks.

Networld wares. Remote access gets a boost at this week's Networld/Interpo-

THE INTERNET 69 Freeware can be OK S often unnecessarily shuns

foreware Web servers for units net projects.

Secure banking tBM and 15 large banks agree to develop secure electronic Tommesce.

CORPORATE STRATEGIES Notes plus Two companies that are using Notes add-ons: Cone Mills uses Prospero to make sure its order process is up to date, and Chrys ler's Grapevine lets engineers keen up with an ever-growing

knowledge base

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for outsourcers. ne Contracting rules An IS contractor tells it like it is.

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News

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- Microsoft Exchange
 The vendor is enhancing its
 E-mail engine with enterprise
 oriented features.
- Career Isn't Over
- Digital cash? Smart cards won't catch on because they can't handle rou tine transactions such as giving
- the kids milk money, humarist Desktop video
 Finally, desktop videoconferencing is cheap enough for corporate America, Kathovn
- Network management Let's do Rmon right this time, Patrick Dryden says.
- Netscape/Novell?
 Rumors notwithstanding, Netscape would be crazy to buy Novell, David Coursey says.

COME VISIT OUR WEB SITE

Free-where? IS has snabbed freeware for building Web sites – but it's a costly snub

www.computerworld.com Forum: Mainframes, anyone? Will IBM's newest minimainframe appeal to anyone outside Big Blue's installed base?

www.computerworld.com kPoll: The usefulnes of user groups

The death of the venerable Boston Computer Society raises the ques-tion: Does anyone get anything out of user groups anymore?



Technical Sections

- SERVERS & PCs
- Storage standards Two emerging storage technologies promise to increase band-width and connectivity.
- Network computing
 As network computers begin to hit the market, managers evaluate the systems.
- SOFTWARE Loves me, loves me not Differentiating vendors' long-
- term partnerships from market ing romances can make or break an IS manager's career. 'netting the software Managers look to Internet
 - based financial and account ing software to simplify customer access to account information. THE ENTERPRISE NETWORK
- Web-based management The Web has already changed the way some administrators manage their networks.
- Networld wares Remote access gets a boost at this week's Networld/Interop show.
- THE INTERNET 69 Freeware can be OK IS often unnecessarily shund freeware Web servers for intranet projects.

- Secure banking IBM and 15 large banks agree to develop secure electro
- CORPORATE STRATEGIES 81 Notes plus Two companies that are using Notes add-ons: Cone Mills uses Prospero to make sure its order process is up to date, and Chrysler's Grapevine lets engineers keep up with an ever growing

knowledge base. Features MANAGING

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- Leadership series

· IS executives are providing direction on a new C30 managing user access to the Internet. See Leadership Series, following page 84. by Randy Weston.

to lay off the CIO turnover myth.

Power tools Colnions on two time- and project-tracking packages.

Users rate internetworking ven-dors 3Com, Cabletron, Bay Net-

works, Cisco and IRM MARKETPLACE . Outsourcing Web projects Web complexities spin off need

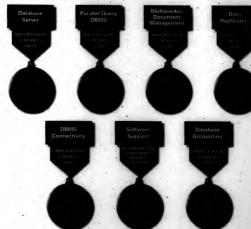
IN DEPTH Contracting rules
An IS contractor tells it like it is.

Family affairs Two generations of IS pro-fessionals reflect on where the industry has been and

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REGISTER NOW.

Some users are sipping Java slowly

Software development wendors are scrambling to roll out tool sets that support the World Wide Web and Java. But some users are beginning to wonder what the big burry is. Symastec Corp. last week reused a beta version of Visual

Cafe, its rapid-development environment for Java. This week, Unieva Corp. spin-off USoft Corp. in McLean, Va., will announce Java and Web page-generating capabilities for USoft Developer the comtem. And by the end of the month, Sybase, Inc. will ship Web.pb, the Web connection for its Powersilder development system. But some corporate developers

said they think the rush has outced reality.
"We haven't even looked at we know it's out there," said Coker. information systems manager at Price Waterhouse LLP's tax technol-

ogy group in Chicago, a Powershop.

This big push to link everything to the Internet is media hype. In reality, it's going to be much

Many corporate wicement shops are taking a go-slow approach

USoft will add the ability to gen

Developer visual tool set beginning in Necember

rewriting applications client/server Developers said they hope tools in favor of Web and lava Web-based add-one mich as Web.pb will make those poinful tools. One crason is the high cost of retraining developers and

ern is whether off-the-shelf Java components will be available that are similar to the VBX and ActiveX

Microsoft Corn's Visual Basic and PowerBuilder. Every third makes white-bong

party in the world Basic," said Ranpresident of RL Consulting Ltd. in Chicago. "Every-

body's hedging very heavily on what's going to he the replace ment for that Harrison's de wa-based projects for Baby Bell

they build a lot more Visual Rasic applications, he said. Right oow, most of lour devel-

opment work] is Visual Basic, and you use Java where you have to," "There's been a lot of hype, ob

viously, and we're not using [Web-based applications] right now," said Bob Brown, vice president of business improvement and infor on services at the Burli Klopman Fabrica division of Burlington Industries, Inc. in Greensboro, N.C. But from a busis rspective, [the Web's] value is owing almost daily, and over the next couple of years, it is go ing to be very important

For Burlington Klopman, that value comes from better communication with customers and consumers as well as within the comneav. Brown said

Lines blur between internal, external nets

By Mitch Warner ANADREM SALES

The big news out of the Internet Commerce Expo (ICE) here last week was that the intranet is dead. The Internet, too, for that matter. Gone. Bye-bye. Call the preacher and start shoveling on the dirt.

Or, at least, the intranet and internet are dead as we know them: two separate entities one inside the corpora- Electronic tion and one out in the public world - separated by an impenetrable firewall.

Instead, companies that do business on the Internet will find they must build strong links between information located inside the firewall and the outside world Such connectivity carries security risks - but also great rewards. Wells Furgo & Co. in San Francisco already ties the Internet to its internal banking systems so

customers can get account information, transfer funds and pay bills online [CW, July 29]. We've been doing business on the wild and woolly frontier since 1852. There's money to be made,"

said William S. Finklestein, chief scientist at Wells Pargo. "[But] we have meticulous security." tion to the Internet, a company

can provide customized informa-

tion to its customers and various ess partners, said attendees at ICE, which is sponsored by In-

ternational Data Group, Computerworld's purent com-Take Mag-Tek, Inc., for instance. The Carson, Calif., comny makes equipment for reading magnetic strips oo cards. It is putting its business procedures on an intranet site. It hopes to

eventually publish key portions on the Internet to belp its vendors and other business partners be more knowledgeable enda Schultz said.

The trick is to put enough information on the 'net to satisfy busi ness partners and customers with out revealing proprietary information to competitors. Schultz said. Linking internal systems to the

Internet helps ensure that information accessed by customers in up to date, said Irving Wladawsky-Berger, vice president of the Internet division at IBM. Federal Express Corn does so to give case tomers up-to-the-minute informa-

tion on package status Intranet applications should be designed with accessibility in mind, even if there are oo plans to make the applications accessible Barkedale, CEO of Netscape Communications Com

By Mitch Wagner Employees at CNet, Inc. broke in

to two commercial Internet sites. last week and made off with credit card oumbers and other propri-etary information. They said they did it to prove the fragility of secu-A reporter and a member of the technical staff at CNefa News.Com online presquare

CNet reporter

broke in to BookSite (hooksite com) and copied a list of credit card numbers submitted by customers. They also broke in to I/h. nide magazine's site (www.upside com) and obtained Utmide's electronic mailing list and a list of prople who had applied for subscrip-

CNet said it planned the break-ine

to show how easy they are to do and that unless webmasters are careful, their sites could be easy prey for criminals. Previous disclosures about troubles with lava security or Netscape Communications Corp.'s encryption schemes have often been based on scientifir studies. But CNet seasted to show that break-ins on the later net aren't nest an academic theory but rather a real-world concern. "It didn't require an Olympia

effort to get into their site. Who

out there set up this way?" said breaks in to sites Nick Wingfield, the senior writ at Nors. Gom who was involved

CNet notified BookSite and Upnide about the security holes and assured the holes had been fixed - published an article last Monday about the break-ins. The targets of the probe admitted to being embarrassed about bow easy it was to break

in to their sites. "We were horrified that this happened to us and that we were named in the article," said Dick Harte, own-

er of Rutherford's Book Shoppe in Columbus. Ohio, which runs BookSite. "Security is very important to us. The effect that the break-ins

will have on Internet commerci overall is unknown, said Ken Alexander, vice president of Inter net banking systems at the Long Island Savings Bank, in Melville, N.Y. On the one hand, the breakins could scare business off th Internet if they get a lot of public ty. But on the other hand, many people are already afraid of inter net commerce, and it's hard to imagine making them more leery,

Alexander said. The break-ins used a bole in a database server from Thunder stone Software in Cleveland. which is used by both sites. A member of the technical staff

Hacker with a cause?

identity discovered the security hole at Usuide and collected the subscriber lists Not surprisingly, there has me finger pointing. Bart Richards, CEO at Thun derstone, said the managers of both sites had Thunderstone's

built-in security switched off while they alpha-tested their sites and then failed to switch it on when the sites went live Harte agreed. "This was just a phin screw-up." he

said. "We left a door unlocked, and CNet But Fric Nee editor in chief at Utside in San

Mateo Calif- said Thun derstone set up and adminis ters the Upside Web site. Richards responded that Thunderstone doesn't administer the databa where the break-in occurred. The targets of the break

ins criticized the CNet staff's "I have to question why they're going around backing into other people's servers," Nee said. "Is that an appropriate thing for them

Richards noted that CNet emplayees broke in to the sites ille gaily - even if they did so in good

"I don't think it is in any case leal to perform a criminal act un der the premise of journalism,"

COMPUTERWORLD SEPTEMBER 16, 1996 (www.comou

Boston Computer Society folds; users fight on

By Matt Hambler

The Boston Computer Society's (BCS) decision to dissolve last week after nearly two decades met with a resounding thud among its 18,000 users and members, some of whom wowed to continue with their special interest groups. But BCS officials described the group's demine as assural.

"Any organization based on a technology is going to bave to change or die, and we didn't change fast enough. BCS doesn't have a clear mission anymore," BCS board member Louise Reilly Sacco said after the board's unanimous vote to cease

the board's unanimous vote to cease operations. Since 1992, membership has been falling

at a rate of 10% to 15% per year, according to the BCS.

However, a strong factor in the group's demise was its financial problems. In 1919, the non-profit BCS had a \$1 million surplus, but the group slipped to extend on the group's slipped

\$1 million surplus, but the group slipped to \$125,000 in the red for its fiscal year ended June 1895. A 'year later, the BCS has a slim \$1,700 in the bank BCS off-

BCS founder jonethen Retemberg says the group had ceased to be

group had consed to be offective. Utve Director Frank Smith dismissed charges of mismanagement and predicted that when the Sooks close. BCS

will have no significant debts.

The group also has had trouble defining its mission. Plans Bybell resigned as executive director in May, after only 18 months on the job [CW, May 27]. Her replacement, Smith, was hirred on a three-month contract but found the board, staff and volunteers unable to come together on what the BCS mission should be.

There was debate over whether BCS should continue as an umbrella group of 100-plus special interest groups or turn into a public service organization.

The first — and once premier — computer users group, the BCS was founded in 1977 by 13-year-old Jonathan Rotenberg. At its peak in the early 1990s, the group had 32,000 members worldwide. As of last was incenbership was down to 18,000. The BCS demise suddened Rotenberg.

but he said the organization had "ceased to be effective."

"BES made sense when there were limited alternatives," but with courses offered

by computer superstores and quick fixes available for free on the laternet, along with dozens, of magazines and other places for computer makers to advertise, it was too difficult for the BCS to compete, Rotenberg said.

"It seems unnecessary that it should die," said retired engineer and member William B. Smith, who is unrelated to Frank Smith, "The resources are very considerable, and there's still a lot of enthusiasse. It's probable there will be an effort to revive it."

BCS officials are less optimistic but said they will help individual user groups carry on by providing communications and sharing user names. At its Web site last week (www.bcs.org), several special interest groups, including Linux/Unix, Lotus Notes, Web and Virtual Reality groups, posted notes of their plans to

perry Schneider, a computer consultant in Burke, Va., who founded the International Association of PC Users Groups, said widespread death of user groups are buildely. In general, user groups are healthy, although they have been chang-



HP puts Unix servers into the 64-bit arena

Re Indhomme Viloseen

Users looking for increased performance from Hewlett-Packani Co.'s Unox servers got what they wanted last week with the compa ny's first 64-bit server offerings. The Palo Alto Calif American bany beefed up its entire HP-0000 commercial Unix server lineug with its powerful 180- and 200

MHz PA-8000 64-bit chip. With this appouncement HF ioins a handful of other windows - including Sun Microsystems. Inc., Digital Equipment Corp. and IBM - in offering similar 64-bit hardware. These 64-bit platforms can support lister performance larger memory capacities and file sizes and substantially larger an plications that 32-bit architec-

But limited operating system and 64-bit application support

merces meets may be able to do chilecture for oute some time ICW July 221

For most IIP users, the real relprizace of last work's an pouncement will be their ability to run current 33 bit applications much faster and nude it scale

much further than 73-bit band. ware permits We have seen a marked inretrent in throughput at the

CPU level, and the transaction processing is significantly in proved," compared with the previous PA-7200 chip, said John Armstrong a team leader for HP operations with Electronic Data Systems Corp. at the GMAC Mortgary Data Center in Hor-

hant. Pa. GMAC is a beta user of the PA-8000 and recently upgraded a musi-processor PA-7800 server with the new ful. bit chin HP's 64-bit K-class server range

ment from HP" said Gary Spencer, chief attoratation officer at True Temper Sports, a Memphishavel subsidiers of Black &

These servers are camble of supporting muty processors and more fransactions per second than our current servers." he said This rives the commany a growth path as application need-

"HP is really meshing forward with its 64-bit architecture and challenging vendors like Digital and Sm" in the mittenne Unio space, said Hill Muran, an analysi at D. H. Brown Associates, Inc. in Port Chester, N.Y.

"This is very good news for longtime HI' neers," agreed Jean S. Berman, an analyst at International Data Corp. in Mountain View, Calif.

workswine framework for its

SQL Server database that in-

clades integration deals with nine

software predicts sources said

But Microsoft says all the sem-

rate pieces "will fit tightly togeth

of out of the box, said Judith Hur

witz, president of Hurwitz Groop

• No how will manuface a second-

warehouse offering that com-

hines its Subove IQ database and

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As part of the

ActiveDW (come-

work Microsoft

afan ribers, to which

data transforms

Up to 3.8T bytes

Up to 8.1T bytes

· Anticipates which rails will need replacemen

. Monitors the wear and tear on locomotives · Increases the use of its own freight cars, cutting down on rented cars

· Projects the financial impact of union proposals

. Cuts payments of sales taxes to states where they aren't required

Union Pacific RR tracks decision-support benefits \$20 million investment begins to pay off

nology, especially tools to care

and feed these large systems

makes the ongoing work tricky as

firms book for information that

Donald Grocsser, a senior infor

mation technology manager at

Union Pacific, said the cost to.

manage a gigabyte of data has

dropped from \$46,000 four years

Even so, "our management was

"We had to get them ready for

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the ideal that there's not always a

benefit to every piece of data. You

have to show the loweralli hene-

fits and keep in contact with your

customers' about the information

More companies large and small

are seconding more for this kind of

last year estimated the data ware-

house market would arrow from

\$1 billion per year to \$5 billion by

1988. Gartner's projection this

Vices.

some calls for a noon.

by \$7 billion market

in 1994 a trend that

has caught the at

tention of worders

selling hardware

software and ser-

Still analysts and

Gartner Group, Inc., analysis

cuts costs or adds revenue

ago to \$6,000 today.

they need, he said

Seeking support

division-support project

By Michael Goldberg

At Union Pacific Railroad, most of the company's assets are in motion - locomotives, the workers who run them, the freight that cumbles on the rails

By building a data warehouse maragers at the 85 billion comm my have gained better control over

thousands of moving targets Make no mistake Union Pacific has paid real meters - an estimat ed \$7.5 million this year and about

820 million since 1992 - for one information systems project. That covered hardware from NCR Corp., systems integration work, consultants' free and staff training - loss of classes for a growing have of 1.700 end users

And there are ongoing technical rhallenges such as maintain ing a data warehouse that grows daily at the Ontaha-based railroad But the benefits have more

than paid for the investment with improved management of freight cars, better maintenance of locamotives and new expense unitytions that reduce

waver Although cost benefit raise were Union Pacific's experailmad's parent com rience was embleni pany, was due to compiece its takeover of Parallel Processing Southern Pacific Rail-

conference here last road last week. This ed data warehouse The ongoing in widment required

Unting varied desortments anomal a communicacy

by a data warehouse If manageral can friebten excess

More work

need to make the merger should increase the railman's technology easier to data warehouse prohandle iect by 60 %, said Don ald Genesser, a seein

ferent departments.

ners sail waders Discreers expect more sophisticated tools to automati warrhouse

traintenance and to historical data that comes in different shapes and sizes from dil

128M bytes to 4G bytes Tools automate data massaging

Brady-to-go data warehouse tools will take yenter stage this week at Digital Consulting, Inc.'s (DCD) Data Warehousing Conference in Phys nix

Microsoft Corp., Sybase, Inc. SAS Instituty, Inc. and Oracle Corp will announce plans for nating more of the process of building and undating data warehouses and their smaller booth non data marts. The med is to no duce the manual coding and data extraction work that information systems departments face.

It's time for people to act out of the forklifting of data," said Doug Lynn, an analyst at Meta Group, Inc. in Stamford, Conn. Ascistomers excured the number of their data warehouses and data marts. They don't want to builk up their IS-staffs" just to feed the growing beast, Lynn said.

But tools for creating a fully nationated floor of information betwive operational databases and lata yorchouses are still in their toney. Lynn said: it may take an-

whole notion to Ohur in to the mainstream of the warehousing market be and The concept of front-to-back data watchers

Up to four são-MHz PA-Booos 326M bytes to 26 bytes

took armeds to Roger Theroads

Data warehousing conference who is leading a

warehousing project at National Medical Care. Inc. tion and metadata requisitory took in Waltham, Mass. But he said by and 1997, the sources said. what he has looked at so far Costomers still will have to have doesn't measure up to the promsolvany from the sendors that are traction on with Microsoft

ives made by window "There just isn't anothing that does all of this for you." Therianh said "There's no salver hellet." National Medical Care is building a data warehouse for raching patient data and other information from the 650 kidney dishes overters that it operates in the U.S. The process of looting and opda-

ing the warehouse is being muoin front of a tube at fewr in the murning kicking off these progroups "Therigalt sold

the following

Replication Server software with Informatica Corn's PowerMart took for extracting and leading chest/occurates · SAS will annumer SAS/Ware beese Administrator which was numering data warehouses.

Inc. in Newton, Mar-

Among the show highlights an grates its tools for building and of corporate data is a challenge-And the immuturity of the tech-

MPUTERWORLD SEPTEMBER 16, 1996 (www.comp.



HP puts Unix servers into the 64-bit arena

By Jaikumar Vijayan Users looking for increased perace from Hewlett-Packard Co.'s Unix servers got what they nted last week with the compo my's first 64-bit server offerings. The Palo Alto, Calif.-based com

may beefed up its entire HP-9000 nercial Unix server line with its powerful 180- and 200 MHz PA-8000 64-bit chin. With this announcement, HF

oins a handful of other vendors - including Sun Microsystems. Inc., Digital Equipment Corp. and IBM - in offering similar 64-bit hardware. These 64-bit platforms can support faster performance, larger memory capacities and file sizes and substantially larger applications than 32-bit architec-

But limited operating system and 64-bit application support

rive the full benefits of a 64-bit architecture for quite some time [CW, July 22] For most HP users, the real rel-

entage of last week's anement will be their ability to run current 33-bit applications much faster and make it scale much further than Whit hard

We have seen a marked iment in throughput at the CPU level, and the transacti processing is significantly improved," compared with the previ-ous PA-7200 chip, said John Arm

ing, a team leader for HP nations with Electronic Data estems Corp. at the GMAC ortgage Data Center in Horsham. Pa. GMAC is a beta user of the PA-8000 and recently upided a quad-processor PA-7200 server with the new 64-bit chin.

"It is a very positive announce ment from HP," said Gary Soro cer, chief information officer at True Temper Sports, a Memphis-based subsidiary of Black & Decker Com

supporting more processors and more transactions per second than our current servers," he said. This gives the company a growth path as application needs see be said

HP is really pushing forward with its 64-bit architecture and challenging vendors like Digital and Sun" in the midrange Unix space; said Bill Moran, an analyst at D. H. Brown Associates, Inc. in Pret Charter N V

This is very good news for ngtime HP nsers," agreed Jean S. Bozman, an analyst at International Data Corp. in Mountain View, Calif.

· Microsoft will announce a

SQL Server database that in-

cludes integration deals with nine

software vendors, sources said

by mid-1997, the sources said

Customers still will have to buy

software from the wendors that

are teaming up with Microsoft

But Microsoft surs all the sens

rate pieces "will fit tightly togeth

er" out of the box, said fudith Hur-

witz, president of Hurwitz Group.

· School will introduce a con-stee

warehouse offering that com-

housing framework for its

As part of the

ActiveDW frame

work. Microsoft

also obes to ship

data transforms.

Union Pacific RR tracks decision-support benefits \$20 million investment begins to pay off

Union Pacific Railroad's data warehouse

By Michael Goldberg CHICAGO

At Union Pacific Railroad, most of the company's assets are in mowho run them, the freight that rumbles on the role

By building a data warehouse. managers at the \$5 billion comny have gained better control over nds of moving targets. Make no mistake: Union Pacific has paid real money — an estimated \$7.5 million this year and about \$30 million since 1992 - for one on systems project. That

covered hardware from NCR Corp., systems integration work, consultants' fees and staff traini - lots of classes for a growing base of 1,700 end users. And there are ongoing techni-

cal challenges such as maintaining a data warehouse that grows daily at the Omaha-based railroad. But the benefits have mor than paid for the investment, with

improved management of freq cars, better maintenance of locomotives and new expense projections that reduce

waste (see chart Although benefit ratios vary, Union Pacific's experience was emblematic st s Commercial Parallel Processing

conference here last week that highlighted data warehouse The ongoing investment required by a data warehouse

can frighten execu Uniting varied deportments around a cor of corporate data is a challenge. And the immuturity of the tech-

nology, especially tools to care and feed these large systems, makes the ongoing work tricky as firms look for information that

Donald Groesser, a senior informotion technology manager at Union Pacific, said the cost to manage a gigabyte of data has dropped from \$46,000 four years

ago to \$6,000 today. Even so, "our management was unprepared for the dollar spend-

ing," Groesser said. We had to get them ready [for the idea) that there's not always a benefit to every piece of data. You have to show the forestill benefits and keep in contact with your ers" about the inform they need, he said.

More companies, large and small.

are spending more for this kind of cision-support project Gartner Group, Inc. analysts last year estimated the data warehouse market would grow from \$1 billion per year to \$5 billion by

1998. Gartner's projection this year calls for a nearly S7 billion market in 1999, a trend that has cought the attention of vendors

selling hardware, software and ser vices Still, analysts and users said vendors

need to make the technology easier to Observers expect

more sophisticated tools to automate warehouse maintenance and to

belo úsers clearas historical data that comes in dif ferest shapes and sizes from did ferent departments

Up to four sto-Mile PA-Goods 1218M bytes to 46 bytes - Up to 6.17 bytes 1 5 \$77.000 Tools automate data massaging

By Craig Stedman

Ready-to-go data warehouse tools will take center stage this week at Digital Consulting Inc.'s (DCI)

Data Warehousing Conference in Microsoft Corp., Sybase, Inc., SAS Institute, Inc. and Oracle

Corp. will appounce plans for tomating more of the process of building and updating data warebouses and their smaller brethren, data marts. The goal is to reduce the manual coding and data extraction work that information

It's time for people to get out of the forkliffing of data," said Doug Lynn, an analyst at Meta Group, Inc. in Stamford, Conn. As sers expand the number of their data warehouses and data marts, 'they don't want to bulk up their IS staffs" just to feed the growing beast, Lynn said.

But tools for creating a fully sutomated flow of information between operational databases and data warehouses are still in their infancy. Lynn said It may take an-

other 12 to 18 months for the whole notion to filter in to the stream of the warehousing market, he said The concept of front-to-back data warahasa

tools appeals to Roger Therisult,

Data warehousing who is leading a

conference ject at National Medical Care, Inc. tion and metadata repository tools

in Waltham, Mass. But he said what he has looked at so far doesn't measure up to the promises made by vendors "There just isn't anything that does all of this for you," Therisult

www.housing.oro-

said. 'There's no silver builet.' National Medical Care is building a data warehouse for caching patient data and other information from the 650 kidney dialysis centers that it operates in the U.S. The process of loading and updat ing the warehouse is being auto

mated "because I don't want to sit in front of a tube at four in the grams,"Therisult said

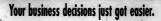
morning kicking off these pro-Among the show highlights are the following:

hines its Sybase IQ database and Replication Server suftware with Informatica Core 's PowerMart tools for extracting and loading client (energy date · SAS will announce SAS/Ware house Administrator, which integrates its tools for building and managing data warehouses

for in Newton Mass

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Changes to Exchange target enterprise

By Tim Ouellette

Microsoft Corp. early next year will give enterprise customers who are considering a major rollout of Exchange Server electronic mail more reason to believe.

At the Exchange Deployment Conference here last week, the Redmond, Wash, firm revealed plants to do the following:

Remove the 16G-byte message storage limit found on each Exchange server.

Improve how Exchange server.

fer- Make Exchange a viable workfow engine sh, for high-level, mail-based work processing e- Uggrade Eachange's performance on age symmetrical multiprocessing servers. Other planned improvements — clustersering support and an improved directory service — decend on the next suggrade to NT

Server, Exchange's only server platform.

All of the above features will not be part
of Exchange 4.5, due later this year, bit of a
further release in 1997. Exchange 4.5 will
provide support for several Internet mesaging, directory and World Wide Web
hermitian contropols (see chart)

browing protocols (see chart).

Although none of the early users interviewed by Complatement has hit the 16Gbyte storage limit yet, it is still an area of concern for companies with thousands of Email users. And users are also concerned because future D-mild plant call for the shillity to carry and store bully image, graphics and wideo files (UK) Aur. 121.

Exchange 4.5 Spoots Internet processing of Feat, disposed in the Control of Feat, disposed in the C

Users are depending on those improvements to achieve large rollouts. But so far, Microsoft estimates that 750,000 seats of Exchange have been installed. And it plans to amounce a couple of deals with more than 100,000 user locenses each.

Dun & Bradstreet Corp. is moving 32,000 Microsoft Mail users to Exchange and is counting on it to become the backbone of companywide E-mail applications. With its old Microsoft. Mail system, "when it got to things like purpord! — mission-critical things — it started to make us nervous," said Don Senth, director of infor-

mation systems at the Wilton, Conn., firm.
"The key drivers for us in choosing Exchange were industrial strength, global operation and large volume," and Todd Cairson, chief information officer at Electronic Data Systems Corp. in Dallas. EDS plans eventually to up 55,000 users on Exchange.

eventually to put 95,000 users on Exchange.

To increase Exchange's message storage limit from 16G to 16T bytes, Microsoft won't toos out the underlying database that Exchange is built upon. Instead, it will change data structures and routines within the database to inserver its storage limit.

Microsoft also allayed a concern voiced by several of the 2,500 conference attendees about a possibly costly client upgrade path for Exchange. Users will get Outlook, a 32-bit groupware. E-mail and scheduling client ICW, June 171, for free inside the Exchange 4.5 wounds batter this

change 4.5 upgrade later this year.

Previously Outlook was expected to be available only as part of Office 97. So users were worsied that they would have to purchase Office 97 and bulk up their desktops to hardle the large but feature-olds client.

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Transforming Enterprise Systems MICRO FOCUS'

Hurricane Fran puts IS to the test

By Thomas Hoffman

When the winds of Hurricane Fran roared down Tobacco Road at 120 miles per bour a few weeks ago, IS managers such as Dana Gantt faced it bead-on.

Gantt, director of technical services at Liggett Group, Inc. in Durham, N.C., had to chains through five trees just to get out of his cul-de-sac. Gantt didn't get much farther - more fallen trees awaited him down the mad. But that was OK

Liggett had planned for such disasters by ensuring that its four ation systems staffers were trained to cover one another's technical disciplines. As a result, Liggett was able to continue processing customer orders with a two-person skeleton IS crew.

Gantt also dialed in to the cigarette maker's Hewlett-Packard Co. HP 9000 Unix servers from home at 2 a.m., during the height of the storm, to ensure that the company's systems were up and

Gaptt did that merely for peace of mind - each of the company's four technicians are wired to the central computer systems with pagers that notify them if an uninterruptible power supply kicks in or if an air-conditioning unit fails.



The aftermath of Numicane Fran, North Topsall Beach, N.C. Water domage and tower outport counted kendaches for the greats IS terriounce

Not everyone was as lucky. Unisys Corp. A11 mainframe from Hundreds of businesses in hardprocessing its normal volume of hit areas, including Raleigh, N.C., 25,000 to 50,000 daily residential and Alexandria, Va., were left and commercial water bills. without power for nearly a week To catch up once the system The insurance information instiwas back online, the city had to tate in New York estimated that calculate bills based on custo the storm cost homes and busi ers' historical monthly consumption. Any discrepancies will have Across town from Liggett, the to be adjusted later. Lester said.

city of Durham's MIS group lost age and was left without power for For some in IS, the biggest probthree days, said Martha Lester.

lems occurred after Fran had For example, Hardee's Food Systems, the IS arm of the fast food restaurant chain in Rocky Mount, N.C., had trouble polling its 3 200 outlets for their receipts after tree trimmers sliced through a Sprint Corp. fiber-optic cable, said Peter Hill, Hardee's vice

president of information services (see related story, page 1). Hardee's execusily hyposped the fiber-optic glitch, thanks to an "overflow" long-distance agreement it has with MCI Communications Corp., Hill said.

Many IS professionals had to work around disruptions. Joe Barrow, manager of operations at an Electronic Data Systems Corp. facility in Raleigh, was formed to obscure at work all much before paper was restored to his

home across town. Others took a more earthy apomach. "Our IS stall came in dirty. We came in jeans. We came in any way we could," said Mary Frye, manager of electronic data processing at Queensboro Steel Corn. in Wilmington, N.C.

Textron calls on AT&T in network outsourcing deal

By Kim Girard

Textron, Inc. expects to save \$125 million over the next decade by handing over management of its global network to AT&T Solu-

And 'Textroo's savings are AT&T's gain. AT&T expects to resp \$1.1 billion in revenue from its biggest network outsourcing "It's a huge deal," said Allie

Young, a senior analyst at Data-quest Worldwide Services in Westboro, Mass. "This is one of those megadeals." AT&T will manage Textron's voice, video and data needs, including LANs. the wide-area network and elec-

Terry White, senior director at InfoTech Consulting in Parsippomy N.J., said Textron is bucking the trend toward shorter contracts with multiple carriers by making a 10-year com

White said with all the uncer tainty surrounding telecommuni-cations deregulation, most comies are reluctant to get locked in. "My guess is there was a very strong client relationship betw the two companies," he said. "As a result, Textron had a lot of confidence that AT&T could do this

and do it effectively."

Easing acquisitions Textron decided to outs AT&T Solutions partly to ease the pain of integrating new sites as the company's acquisitions multiply, said William Gauld, chief information officer at

Textron. As the company has added locu-tions from Malaysis to Mexico, linking them to the U.S. network has proved time-consuming be-cause of different technologies

"It's very difficult to predict when acquisitions occur, and when you close the deal, you need to quickly integrate," Gauld said "We can do that, but it's a matter of how long it would take. And in today's environment, speed is crit-

ical to us." With a more tightly integ global network, Gauld said, Providence, R.I.-based Textron expects. to generate 35% of its revenue from outside the U.S. by the year

wide in five business segments: sircraft, automotive, industrial, systems and components, and fi-

Under the contract, AT&T will pgrade and expand Textron's router-based frame-relay network. Converting most of the network to frame relay is the goal. and work on about half the sites is nder way, Gauld said.



"[The project is] like taking apart a 747 and putting it back to-gether," said Rick Roscitt, a managing pertner for outsourcing at

Textron is also developing a corporate intranet and running an electronic commerce pilot in-Under terms of the deal, a core

of Textron networking engineers will be hired as AT&T emp more staff members will be brought on board and some AT&T employees will be assigned to the project. End-to-end m

handled from AT&T Solution's new global client support center in Durham, N.C., from which congestion patterns can be predicted and the condition of routers and public branch exchanges can be

Gauld said Textron chose AT&T instead of British Telecommunications PLC, the only other contender for the job, because ost of Textron's networking trail fic is in the U.S. where AT&T has been predominant.

Disaster recovery put to the test

urricane Pran had the industry's top disaster recovery services ven-

rs. But seven of those mers rescinded their dec wrath of the storm. Only mer -- a dental supin in Sevennah, Ge. -

nesses more than \$1.6 billion.

sessoriate director of MNS

computers to water dam

The outage prevented the city's

ngard Recovery Ser-re, Inc. on alert, while two

vice provider. One manufactur-er was still without power after ater operatives on a



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Users set for networking nirvana

By Computerworld staff

ce a LAN-only co this week's Networld/Interop '96 w in Atlanta will showcase everything from turbocharged remote access servers to network

Users can expect a Scourt press on LAN switching products with Gigabit Ethernet connections and a lot of cussion on the role of the internet and intranets in corporate

Eric Schmidt, Son Microsystems, Inc.'s chief technology officer, will give a keynote address titled "Evolution or Revolution? The Future of Network Computing." Irving Wisdawsky-Berger, general man at IBM's Internet division, will speak on 'The Center of Gravity for the Internet: Server or

jor networking vendors that will use the decade-

ucts to support a multimedia dealer communications

covering a range of topics (see re- The WaveSwitch 9000 will ship ed story, page 57).

intree Systems, Inc. in Wai-m, Mass, will announce the 3Com will unveil a low-cost eSwitch 9000 a highest data. Ethernet switch that can be in-

cluded in its Office-Connect stack of net working products. Office-Connect targets sites with 20 or fewer PCs. It enables users at remote sites to mix hubs. wide-area network gateways, fax machines, CD-ROM servers, print servers and routers in a stack. 3Com competes

> lett-Packard Co. in this market. The OfficeConnect Switch 140 has four switched Ethernet ports that allow firms to run a dedicated 10M bit/sec. unlink to the deskton and one 100M bit/sec. unlink to connect them

on Motor 68 Ltd. uses 3Com's OfficeConnect prodto other bubs, said sources briefed by Santa Clara, Calif-based 3Com. old show to roll out products are center switch that can be. This first OfficeConnect switch 3Com Corp., U.S. Robotics Access equipped with Gigabit Ethernect will ship in November. It will Corp., Microsoft Corp. and Cas upinion. Its backplane will have a cost \$1,955.

Cascade will unveil two systems designed to enable informat early next year. Pricing hasn't tems managers to off-load the chores of remote access to

> The Westford, Mass., co oy's switches are the AX 800 (\$27,500 to \$200,000) and the higher-end AX 1600 (\$32,500 to \$485,000), which can handle up to 672 digital moderns or up to 1,344 Integrated Services Digital Net-work (ISDN) connections on one shelf. Both will ship in the fourth

Network management SunSoft, Inc. will detail the expansion of the Solstice Enteraccressively with Hew prise Manager. Besides groo the enterprise network mana

ment platform for easier con curation and use, the Monat View, Calif., vendor will add multivendor support and tools for managing security, electronic mail and systems. Shiptors and pricing information wasn't Bay Nets rorks, Inc. in San

Clara, Calif., will demonstrate voice, video and data networks with the help of partner Lucent Technologies, Inc. Bay and Lucent integrated Bay's Optivity En-

terprise network manager for hubs, switches and routers with Lucent's Definity manager for

The combination will be available from Lucent as OneVision. It will also be available with Version 7.1 of Optivity, due in November. Pricing will be based on con-

Remote access U.S. Robotics in Skokie, III.,

will announce the NetServer/8 I-modem and NetServer/16 I-modem remote access servers. The servers can support analog or ISDN calls on every port. The products were design for small to medium-size sites that

use ISDN but must maintain anolog access to remote users. Net-Server/8 costs \$8,995, and Net-Server/16 costs \$13,995.

Microsoft in Redmond, Wash, will unwrap NetShow software, which can be downloaded from the laternet for free to help net-

NetShow includes ways to develop live and on-demand ser-vices and provides content creation tools, including synchrontion of audio and video. It was designed to provide efficient transmission of live events, speeches and meetings over a corporate network

Internet, net management top attendees' agenda

Computer world staff last week polled a handful of the es-pected 60,000 attenders at this week's Networld/Interop is Atlanta. We asked upors why they are going and what they expect to find. Most want to see a smorgasboard of product in action and tolk to the engineers working on them. Net-work management and the internet were hot topics.



world/laterup is the only olace in this world where I can get my bands on everything I need to see under one roof When I'm considering a techonlogy, I can find five vendors that have it on the show floor. visit their booths and talk to their engineers. I've solved many a problem by spending

a whole day on the show floor. and loften make buying decia from my hotel room. That's the biggest business besefit I get out of the show."

I go mainly to look at Internet strategies. I'm going to the new products."

ternet development easier - i.e., how to access databas es from the internet and how to do interactive [World Widel Web development. My boss expects me to go to Interop and come back with a long-term strategic direction for our laternet (intranet denlarment)

John Scoggin, director of work operations at Del-rya Power & Light Co. in Newark Del.

"I on to the show to evaluate network management sys trins - ones that in beyond Simple Network Manage ment Protocoll. That's a big need we have today I read about all the latest and great est products and technologies

and go to the show to see them in action and talk to the engineers working on them." Peter Rubicam, first vice president at Dean Witter

Reynolds, Inc. in New York: For me, Interop is all about networking of the people kind to I can increase my industry contacts. Secondarily, it's a fact-finding expedition and a chance to check out

networking support at Turner Broadcast-

I want an up work building blocks - the next versions of TCP/IP and the Simple Network trying to find out when we'll

working technology."

addressing and when we can take advantage of new ment functions. Her secure and shore efficient

Parker said he particularly is seeking tools to help amage service. For example, he said he wants to give users and the help desk some idea of the time resired to deliver electronic mail between Atlanta and

sites around the world or how long network repairs Mons Ellingson, leader of the network managemen engineering group at Arizona Public Service Co. in

It's a great way to try all the new management tools, see the latest internetworking gear and catch up with net-

COMPUTERWORLD SEPTEMBER 16, 1996 (www.computerworld.com)



CA backs desktop management standard

Computer Associates International, Inc. this week will unveil support for a key desk-top management standard at Networld/ Interop '96 in Atlanta. This will enable CA-Unicenter users to cut costs and maintain freedom of choice as they extend the sys-

ns management platform's reach. Support for the Desktop Mana Tank Force's Desktop Management Interface (DMI) should also let users preserve their investment in LAN software and skills, while giving central managers a sin-gle point of control.

"Maybe it will help" some shops, but we like to keep management of the Unix environment separate from the LANs. and we have no plans to merge them."

Charles Lomino, Unix system

The Unicenter platform is geared toward maintaining larger systems and critical business applications throughout an enter-

CA this week will join the task force, a tric vendor consertium that is developing ways to control unruly systems at the end of corporate network connections. By pting the task force's interface standards for its platform, CA can open up current or future versions of Unicenter to workgroup-level tools that support DMI

"Unicenter users can com grate the desktop manager of their choice without writing a line of code," said Sam Greenblatt, vice president of advanced

technology at CA in Islandia, N.Y. These management options include packages such as Microsoft Corp.'s Systems Management Server, Intel Corp.'s LANDesk, Novell, Inc.'s ManageWise and Symantec Corp.'s Norton Desktop Admin-

Hierarchy capabilities
"Linking to these tools lets CA mers build a

management hierarchy for the first time," said Ray Paquet, senior research analyst at Gartner Group, Inc. in Stamford, Conn.

Now departmental or branch-office staff can watch their workgroups with LAN-Desk, for example, and also pass informa-tion about station inventory or configuration up to a central point for monit ing, Paquet said.

DMI support gives CA a ready-made way for its central management platform to access local management tools without requiring special effort by users or fors, said Paul Mason, director of coterorise systems

Austin, Texas-based division of IBM, rea their tools to custom interfaces for the TME 10 framework. Some CA users den

But few users of any large-scale management platform are ready to take the neces-sary organizational and cultural steen to such management work, Mason said. That is the case at Ann Taylor Stores trol for all systems, from large servers to Corp., a Unicenter user in New York. CA's

Charles Lomino, Unix systems as tor at the retailer. "Maybe it will it shops, but we like to keep managem the Unix environment separate from the LANs, and we have no plans to

"I have better ways for my staff to spend their time than keeping our network up and running ... that's NETSOLVE'S job.".



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Net management tools are browser-bound

By Patrick Dryden

Network administrators craising Naturald/Interne '95 this week should look closely at screens displaying their favor-Many familiar tools will apnear on a housser screen for

the first time instead of on the ogy, Inc. in Nashua, N.H. nsual costly, complex and cumbecome console

Meeting demand

3Com Corn. Bay Networks. Inc. and Cabletron Systems Inc. will preview adaptations that can deliver reports anywhere via the World Wide Web. Users of management tools have been clamoring for this catability, so they can open up ports for however access. "Get-

mance information At Bester Healthcara Comfor example, reports that track router utilization trends throughout the medical manu facturer's network remain

stock at the conside remains RouterPM from 3DV Tuchnol-There's no easy way to more those reports around to everyone who could benefit

from them," said Steve Tindall. infrastructure project manager at Baxter in Deerfield, El. Instead of transferring files networkwide or copying them to a floppy disk, Tindail awaits the next version of RouterFM. which can publish those re-

for all our took would absolutely belows," he said Vendors are starting to spond in the fol-

Clara, Calif., will adapt Transcred.

me habe emitcher and other in ternetworking over Web sunnort is scheduled to ship late ·Bay Networks will demonstrate the ability to monitor its Optivity console and view reports on managed routers. hubs and switches. That sun-

nort will be available in Novem.

ber in Onfiviry 7.1 Interactive capa-Gettine Web bility - so man support for our agres can config tools would ure Bay Networks absolutely devices through a help us browser instead of a console will come in ter-

phases. The Bay Stack 100Base-T hub will get an Web server. Agent software should support other products by early next year.

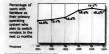
· Cabletron, in Rochester N.H., will preview upcoming in-

motely evaluate recommendations for responding to problems, and the ability to interact with all Spectrum services through an information browser haved on Microsoft Com's ActiveY technology Frontier Software Develop-

ment. Inc. will demonstrate WebScott, an option for accessing more than 60 octwork performance trend reports from its NetScout Manager It is slat. ed to ship next month. Technology

SNMP Research International teractive capabilities that will Inc. will unveil tool kits that require Web server support. make Simple Network Manage-They include the ability to quement Protocol (SNMP) data ny the SpectroRX case-based mailable to any manager with a reasoning tool through Java browser [CW, Sept. 9]

Novell users still loval. but many hedge bets



CONTINUED FROM DAGE I

increasingly regive about No vell's long-term prospects as a net work services. Interpet and intranet company.

These coocerns could spark de fections to NT if Novell duesn't address them in the next six to 12 months. And Microsoft already has a foot in the door, with 40% of NetWare shops surveyed saying they use NT as an application

"It's a very confused market." said Duane Kelling, vice president of MIS at Erickson Consulting Inturnstuned in Mineumolle

"We're sticking with NetWare. but I'm not betting my business solely on Novell. We've chosen a database wendor and 4Gt langreate that will allow us to play in

the NetWare, NT Server and Unix environments," he added Haltins too said he would not fer oot to start over again with a

new network operating system. and he isn't counting Novell out. But Halkias said until he is sure that Novell is back on track, he word upgrade from SetWare 4.1 to the new Green River 4.11 re

"We use NT Server as an appli cation survey For now I'm play ing Novell against Microsoft I want Microsoft to improve NT Server's directory services and Novell to come up with a clear lo ternet and intranet strategy Meanwhile, I have nothing to gain

by spending money upgrading right now or switching to Win dows NT," Halkias said. That attitude doesn't bode well for Novell's revenue stream. And David Muschella, white vace

cated they are also deploying Only 12% said they were "very

cation wrows

president of research at Compaterworld Research in Framing ham. Mass. noted that more than half of the stauoch NetWare users surveyed said spending will be that is the year ahead. Fewer still said they are consid ring NetWare as their intranet

server (see story below). Among the 14% of NetWare mers surpresed who said then were moving to Windows N Server, the most off-cited reason was the close integration with the Microsoft Office desktop application soils

There was also a prevailing per prion among those switching that a mass migration to NT Serv or was inscribable. We switched to NT because it

offers better interration with oth er Microsoft Office packages I just seems to be a Microsoft world," said Ed McBride Jr., an

More than half the staunch NetWare users surveyed said spending will be flat in the year

ahead. environmental scientist at the Air Division of the Alabama Depart-

ment of Environmental Managerment in Montgomery Als The expected announce at the trade show include the foi

 Novel will formally launch Net-Warr 4.11, alut known as Green River, which features an automated file server crash recovery facility, improved TCP/IP protocol support, the NetWare Web Surfer

integrated browser and Novell Directory Services support for Win-· IBM will take the wraps off its eight-way Symmetrical Multipro-

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more power scalability and fault tolerance across enterprise net-· Microsoft Will counter with the Distributed File System (DFS) facility for Windows NT 4.0.

which debuted July 29. DFS is an interim stee up from Microsoff's current domain name services functionality while users wait for Cairo, NT Server's fullblown directory services engine expected to ship next year DES lets businesses create a single file ever directory tree to more eas ily find, browse and access infor mation in the directors

NetWare by the numbers

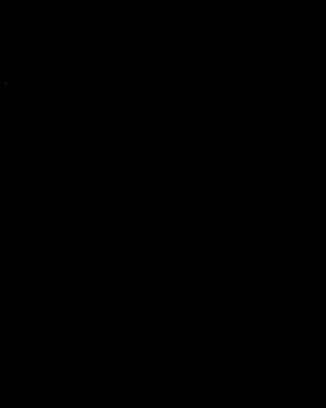
Computerworld poll of likely" to upgrade to NetWare 4.11 — code-named Green usera confirmed some River - within a year. widely held beliefs and con-Of the 20% who said they are tained a few surprises and red unpure about continuing with flags for Novell. Survey high-NetWare, 86% said they already lights include the following use NT Server or are consider · While 66% said they will comain loval to NetWare, 30% indi-

· Roughly 7% of the res dents who said they will switch Windows NT Server as an appli to NT Server said they will slowly replace Net Ware over a period of several years.

Only 2.5% said they are quick by replacing NetWare with Windows NT Server. Some 38% of the NetWare shops said they will deploy No well Directory Services in the next 12 months.

 Fully 77% of the self-described Novell loyalists said there was no chance or a slight chance that they would use NetWare as their intranet server in the pext 12 months - Lawra DiDio

COMPUTERWORLD SEPTEMBER 16, 1996 (www.computerworld.com)



Net management tools are browser-bound

By Patrick Dryden

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NetWare by the numbers

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Few gains made against hackers

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in recent tests on 30,000 of its co the Pentagon discovered that 65% could be backed in to. Moreover, 96% of the

"We are getting at least a thousand hits every 24 hours," said Surah League, deputy commander at the Pentagon's Center for tendees at a Information Security. "Within minutes of tion warfare. putting up an internet firewall at one facilise, administrators aren't aware of the ty, we were getting pinged by intruders."

The Pentagon has begun a \$750 million, five-year program to improve the sec of its computer systems. Learne told attendees at a conference here on informa-

Stephen R. Katz, chief information secu-rity officer at Citibank NA in New York,

Have your company's computer syst een subject to unauthorized use in the past so months?



ned clueless users and careless wo dors for successful computer attacks. "Products either lack security or are delivered with security functions turned off," he said. Some are even delivered with hidden back doors to allow vendor me

Russian backers broke in to Citibank sysems last year and made off with some \$10 million. The bank has declined to say just how the cyberbeist was accomplished.

Katz called on vendors to establish "the nctional equivalent of the Underwriters

Laboratory" to certify security products. That is beginning to happen. The Natio al Computer Security Association (NCSA) in Carlisle, Pa., one of the sponsors of the recent infoWarCon 5 show, has established certification programs for antivirus prodracts and network forwalls

Not enough testing NCSA Education Director Michel Kahay said vendors are negligent in releasing products before they are thoroughly test-ed. The state of quality assurance today is appalling, and the expectations of end users have fallen "he said

Kahay said secu hould avoid early releases of products unless they must buy them for functionality reasons. Then, he said, users should apply their own quality assurance measures, such as stress testing

Katz said backing has entered a dange ous third phase. In the first phase, backers were driven mostly by curiosity. In the sec-ond, profit became a motive. Now, Katz said, competitors are out to "interrupt your

Indeed, the growing threat from rog states, organized crime and info-terrorists worries many information warfare specialists. "We are seeing a blurring of threats," said Michael Nelson, a White House spe-

cial assistant for information technology. "It's hard to distinguish military threats

from police matters."

Nelson and other government officials hailed the recent establishment of the President's Commission on Critical Infrastructure Protection. Within a year, the commission is to assess vulnerabilities and threats and recommend policies to protect the nation's computers and networks against attack ICW, July 221.





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> REAL WORLD SOLUTIONS

Unix vendors reach for NT coattails

Traditional Unix vendors are increasingly leveraging years of data center experience to cash in on growing corporate interest in Microsoft Corp.'s Windows NT. That's good news for corporations that allows up to three NCR WorldMark servers

availability to deploy critical applications on Windows NT

NCR Corp., for unstance, recently announced three-way, high-availability clustering software for Windows NT wewers It

backup for the other in the event of an ap-What the folks at NCR have done is to

plication or system failur take out of the loop the time and the huge ganizations" to implement those features in

need that kind of Unix like reliability and to be tied together, with each providing. Windows NT, said James Hurley, an analy at Aberdeen Group, Inc. in Boston

The Dayton, Ohio, company also released six software recovery kits that let corporations back up and quickly restore database and other large applications in case of server failure. The products are based on technologies that NCR has used

for years in the Unix space. "A lot of the applications we are writing on Windows NT are business-critical, and, basically we need the highest reliability and availability there is "said Bob Romero project manager of enterprise servers at United States Fidelity & Guaranty Co. (USF&G) in Baltimore, USF&G runs claims processing and other core applica-

tions on Windows NT servers NCR's announcement highlights a trend among midrange vendors similarly seeking to raise the NT performance bar. Among the actions taken by firms are the following: · In the past few months, Digital Equip ment Corp., Data General Corp., Tandem Computers, Inc. and Hewlett-Packard Co. have announced high-availability clustering

software for Windows NT NCR and Corollary, Inc. recently announced hardware technology that allows four-processor symmetrical multiprocessing boxes to be upgraded to eight-proces sor systems. Such servers are supposed to provide higher levels of performance and inexpensive hardware scalability for NT The same vendors provide hardware and software books for tying Windows NT serv ers more fightly into the enterprise. That

includes better systema and cross-platform sication management capabilities. But advances such as those are just beginning to address fundamental questions relating to the viability of NT as an enterprise-class operating system of the future. analysts caution In the past, skeptics have pointed to the

limited scalability, limited transaction processing capabilities and untested nature of the operating system as major factors work ing against it in the data center. "NT is still in its infancy, but some of the

things that are being done with NT are very promising," said Sean Gilbert, MIS manager at Cardservice International in Agoura Hills, Calif. The company runs a computer telephony application under Windows NT and eventually plans to port database applications to the operating system.

O Digital announces some NT products See page 42.



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Solutions for a small planet TRM

Suite licenses confound users

By Lisa Picarille

Users wading through complex licensing agreements for their suites of office productivity applications are finding the

would "need to be a lawyer" to sort out licensing requirements - especially when it comes to suites.

"It's a thicket of terms and conditions and negotiated deals that is intended to be confusing," said left Tarter, editor of Softletter," an industry newsletter in Watertown, Mass. 'The more confusing the agreements are, the less likely users will really know what they are actually paying for - which means that Microsoft can make more money."

For example, some users say obtuse

to pay a suite veodor more for support to get concurrent, or multiuser, liceases. It is often unclear if the agree ments apply to overall use of the suite or to the individual applications that comthe suite. Adding to the complexity is the fact that the too three suite ven dors - Microsoft Corp., Corel Corp. and Lotus Development Corp. - use

different terms for volume licensing, despite users' pleas to standardize. Microsoft singled out The strongest criticism has been directed at Microsoft. One user said the complexity and prohibitive cost of signing a licensing agreement with Microsoft was one of the reasons his company chose to stick with Corel WordPerfect Suite.

Office when we decided to make the change to Windows 95," said Gary Will kerson, supervisor of end-user services at Kaiser Foundation Health Plan, Inc. Wilkerson oversees 1,500 users, in

cluding about 700 who use products from WordPerfect Suite. He has a licease for 250 to 300 concurrent users. "The cost of going from sin user licensing (with Corel products) to concurrent user licensing [with Micro soft products for us would be about \$230,000. That is just way too steep." Another IS manager, whose company

"The licensing issue is a big one. We

thought about switching to Microsoft

is a longtime Microsoft Office user, agreed to speak on the condition of anonymity. "It's like leasing a car. The terms are so confusing that you can't figure out what you are paying for. And the only time Microsoft wants to make things understandable is when you are in viols tion of the rules. That trans

more money for Microsoft."

We have heard this negative feedback ... [and] we agree that the licensing is more complex than we would like it to be, and we are working hard - esnecially for Office 97 - to simplify it."

said Michael Graff, group product man-ager for Microsoft Office. He declined to discuss details about Microsoft's new licensing plans, but he said the new program will be announced when Office 97 ships this fall

Tarter said it is easy to document the decline in the price of software sold at retail. But he said it is much harder to chronicle how much the cost of signing corporate licensing agreements has noe up because of the complexity and ope of licensing agreements.

Office 97 will help users share infor mation. See page 49.

IBM aims S/390s at Unix

surance's Deuglas Mackle says Ramor 3's additional disk capacity will give him room to grow his data storage operation

By Michael Goldberg In announcing a third gener

of sincooled maintrames IRM of Scials last week pledged that the new System/390s would compete against Unix vendors who have circled big iron users like bus pards overbrad

Some observers are skeptical that IBM will win converts to the mainframe. But the pair of new posterns to be available next month - the S/390 G3 Server and the S/390 Multiprise 2000 -

sound sweet to the faithful. The G3 server indicates every thing is moving to "smaller, faster cheaper. That's a delightful set of trends," said Gerard Higgins, assistant vice president of data cro-

ter and network resources at Nyaex Corp. in New York. The newer models will allow Nynez to save enough floor space to close some data center build ings in New England, Higgins said 'That saves tons of mon and simplifies our operations," he

At 45 MIPS for one processor, the G3 machines boast double the performance of previous aircooled System/390s that use CMOS technology. The Multiprise, designed for small and mid size firms, comes in models that start at 3.5 MIPS As expected, IBM also an-

ounced System/390 software, including Release 2 of OS/390, and accompanying storage subsys-tens, including Ramac 3, which doubles the capacity in one disk array to 180G bytes [CW, Sept. 2].

More bang for the buck pete, he said. Ramac 3 also will offer a price break to users such as Zurich Inrance Group in Schaumb III., said Douglas Mackie, vice president of megacenter operations. And with more capacity on the disk arrays. "Ill get back twothirds of the |direct-access storare device! Soor, so I can use the same space and grow larger" in

data storage, Mackie said. IBM would like the Multi to compete against Unix nerver vendors, said John Young, an analyst at The Clipper Group, Inc. in Wellesley, Mass. But Young said IBM mainframe sales staff have little experience dealing with Unix shops. IBM's success could

and systems integrators, he said. IBM's appeal to a broader audience gets a boost from the system's Unix compatibility, said David Floyer, an analyst at International Data Corp. in Framingham, Mass. But one thing lacking ished porting of SAP AG's popular R/3 application to System/390. IBM needs to get software such as that on the mainframe to com-

pend on third-party resellers

Besides System/390 hardware and Ramac 3, IBM announced the A "snapshot" feature for Ran

Virtual Arrays - formerly Storage Technology Corp. Iceberg that creates a second copy of the information that details where data is located in a disk array. • World Wide Web gateways for CICS, MQSeries, DB2 and IMS cations, due in Decem

• Ramac Data Migration Service software to move data from older 3990-compatible storage system to newer models, available by wear's cod

· A Magntar tape drive com with Storage Tek tape silos.

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Computer Industry



Marengi: It's time to win

Two weeks ago, Joe Marengi, a 43-year-old Lynn, Mass., native, replaced Robert Frankenberg as presi dent of Novell, Inc. In an exclusive Computer world interview with senior editor Loura DiDio. Marcun spoke about Novell's marketing woes and detailed plans for entoritioning the company

CW: Who's running the show at Novell now that the jobs of president, CEO and chairman have been split? Marengl: I'm running day-to-day operations. We want to bring in a CEO who's an industry luminary. [Editor's nota: Chairman John Young is intarim CEO.

CW: Will you throw your hat in the ring for CEO? weegs: Definitely. But it's the board's decision. My job is to respond to Novell's customers, motivate am players and get Novell moving in the right direction.

CW: One of the biggest criticisms regarding Novell's strategy over the past two years is that it was too defensive with respect to Microsoft.

ungl- BIS Gates and Microsoft aren't my or Novell's archrival. Novell competes with many vendors. Truthfully, our biggest rival in the last few years has been ourselves. We falled to clearly articulate a strategy. That will change oow.

We're going to be more aggressive - I'm different from Bob (Frankenberg) in a lot of ways. As far as I'm concerned, winning is the only viable option in life.

rengl: You're going to see a new, unified Novell the company with an attitude. We have tremendous technology, but we've never told people why they should use NetWare, GroupWise, etc. Now we have to deliver bulletproof software and open up the technol-

CW: When will Tabasco, the code name for NDS running on Windows NT Server, ship? gl: Right now, it's stated for first-quarter dailyary. It's the most cogent strategy we have for NOS.

CW: is Novell for sale?

rengt: No.

Name your price

IS talent plays hardball with software firms By Julia King

orget simple raises and signing bonuses. Whitehot demand for top technical talent is forcing software companies to become much more cre-

Today's packages are also likely to include flexible working hours, equipmeet for a home office, performance based bonuses and increased stock ordions just to name a few of the increasingly popular perks, recruiters_

"People with webmaster talents or individuals developing in Java or Hot lava can pretty much name their price and assignment," said Brian Hoffman, a partner at Winter, Wyman & Co., a recruiting firm in Waltham,

A talented player really does have the ability to make some rather strident demands. Creative freedom and fexibility are the big demands. Right now, they can have both," he said. A new survey of 500 software comanies by Coopers & Lybrand confirms the skyrocketing demand for information existens takent. In the root year, nearly 70% of software compo-

nies exmeded, increasing their em-

plower base by an average of 34%.

"That's a very high number who you look at statistics from the rest of corporate America, where raises average between 3% and 5%," said Larry Schumer, managing partner at Coopers & Lybrand's human res advisory service in Bosto Signing bususes of between \$5,000

and \$10,000 and plenty of stock op-Some are also one "Stock options are doubling for key talent. Where you used to give a recruit! 4,000 options, now you give

Challenging, creative week The promise of even mo challenging work ahead

The skills demand has given rise to nother trend — an in-house human ources executive at a proving

number of software companies. Sapient Corp., a software deve ment company in Cambridge, Mass., has bired a full-time director of biring and 17 full-time recruiters. Com executives also regularly brief share holders on the firm's recruitment ac-

"We spend so much time talking to people about how we hire because it is seen as a fundamental source of competitive advantage," said CEO Jerry Greenberg.

Multiple job offers Most candidates Sapient talks to also have neveral job offers on the table,

Greenberg said. Marcam Corp. a software applications company in Newton, Mass., also has brought in a full-time vice president of human resources. "One of the biggest challenges facing high tech is attracting and retain-

ing talent, but traditionally, there bas not been a big focus on buman resources," said Phil Gaetano, Marcam's oew vice president of human

"HR was seen more as an admir trative function, but now it's growing into a strategic function." Gaetana

PeopleSoft to embed Red Pepper tools

By Julia King

PropieSoft, Inc.'s acquisition of Red Pepper Software Co. two weeks ago should come as good news to users looking for an all-in-one software system for supply-chain and manufacturing operations.
PeopleSoft, in Pleasanton, Calif.

bought Red Pepper in a stock transaction valued at \$225 Planning milion. The vendor is integrating Red Pepper's plan-

ning and schedulare into its own manual ing system, which is scheduled for neral release with PeopleSoft 6.0 in

The combined software will let ring planners creete and

goods and shipping products — all based on real-time manufacturing in-

It will also give salespeople the abi ity to promise shipments based on actual production information rather than days-old information that may have changed several times since it was entered into a system. That cape bility, users said, is critical to providing good customer service.

Traditional manufacturis tems work in batch mode, and there's quite a delay," said Frank Glauner. vice president of information syst at Corning Costar Corp. The labo tory equipment manufacturer located in Cambridge, Mass., is a beta site for

"Now a planner can be replanning in resi-time mode," he said. Under terms of the merger as ment, Red Pepper will operate as an independent business unit of ProofeSoft As such, it will maintain its own sales and marketing staff. In a somewhat unusual twist, Red

Pepper will remain free to partner with other enterprise software ven-dors, including SAP AG, Oracle Corp. and Basn Co. — all PeopleSoft rivals.

For oow, though, PeopleSoft is the only vendor to have fully embedded the Red Pepper software into its own That saves users the time and ex-pense of building interfaces between he two systems. Users also get one view into the en-

tire supply chain, from the time ray terials are ordered to the time finshed goods arrive on a customer's ording dock.

How to tell the difference between paper tiger. See page 49.



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Born-again CIOs

For years, it's been fashionable in management circles to vilify CIOs as chueless buffoons—Buster Keaton clones wandering around in a daze, waiting for the next building to fall on them.

So some people will be surprised this week at the results of our research that shows that "ClO" doesn't mean "Career is Over" asymore (see page 88). In fact, ClOs actually have some of the best track records for job longerity of all top corporate officers — an average of 5.5 years.

Ironically, it was exactly 6.5 years ago that an issue of Business West carried the first press reference to the "Career is Over" label. My theory is that the joke was

obsolete even before it started. Today's CIOs are survivors, quite a different breed from the

quite adiferent breed from the transitional executives of the late 1900. Consider the turnit that characterised the IS profession at that time. We were mired in recession, restructurings were disnostring America's biggest copporations, Cierch forever com-

puting threatened the entabliabed mainframe order, and Windows was about to change the face of desktop computing. Si outsourcing megadeais were being signed every few weeks, PCs were searing the saturation point in corporate America, and IBM was cruistin from bruisten.

Many of the changes that came down around that time threatened the established order that had ruled corporate [5 for 3] years. It made the transition is town control freak to coach, and those (10) who didn't per with the program quickly you with the outplacement director. But in a Durwinian twist, many of those who survived did so because they adapted to change. And adaptation has been perhaps the most critical survival skills in Nit in the warea since.

The paradox of the CkD position for some time has been that the job, for all intents and purposes, can't be done. No one person can manage the information resources of a large organization in which two thirds of the people work principally with information. We have resigned ourselves to a certain degree of chaos and redundancy, because, well, it's worth the trouble.

that aims to put the Career Ia Over joke in the closet.

Today's CIOs are more flexible, approachable and business focused than their predecessors. Let's give them abreads





Microsoft: Focus on Internet, not Cairo

The emerging uncertainty regarding Microsoft's NT/Cairo operating system ["Cairo detoured," CW, Aug. 5] stimulated my thinking.

Do we, the marketplace, need competition in the exploding laternet arena among providers of browsers, development tools, security and management software? You bet we do. We also need the competitors, such as Netscape and Microsoft, to gestainely cooperate in rapidly defining and embacking needed stan-

ing and emperating better the dards for internet software.

Do we really need another proprietary operating system, such as NT?

We already have many open Unit operating systems that are time-tested, rock-solid and rich in functionality, IBM's ADK, HP's HP-UK, SCO's Units, Sun's Solaris and others cover

requirements from a uniprocessor Intel PC to multiprocessor mainframe-class enterprise servers. These Unix operating systems are cost-effective and remarkably com-

cost-effective and remarkably compatible. They are becoming ever emier to use with [graphical user interface]-based tools and are available now.

I suggest that the marketplace would be better served by having the large, but finite, resources and management attention of Microsoth focused opaurely on Internet standards and products and not diffured by NT/Cairo. Does Microsoth have the courage to publicly make a realiotic commitment, one way or the other?

> Bob Hutt Technical marketing manager PMC Data Service Fort Mitchell, Ky

Contrasting an

As one of the individuals with treated the OS/2 Mortin both front your product review Meetin to be fair and account

29].

I superially found it conferring that I won't fire on one who had treatile with the transverse and treatile with the converse and th

Though somewhat briefly states the article clearly shares the Computers would lim't single mindodly best on ellerination

In stark contrast, Porrest Commits article on the differences between however was saything but "in Dopts" ["Browing the brownes," CW, july 30].

doesn't begin to ceratch the surface of the inne. The article was oversimplified, and the fact that Web-Repleter, the only native

community would be much nore fargiving if articles such as your product review are chosen in the place of browning articles that would be beter off if they were browned.

Don't count on an 'open' OLE

I am taking your story, "Eyes on the enter-prize," [CW, Aug. 5] with a pinch of salt. Microsoft has never really surrendered the rights to anything. It has been a company that sit-lines technologies from other companies and then settles out of court when things are sticks.

when tangs per socky.

There are some who claim that
IBM owns the patent to OLE, which
blicrosoft now calls ActiveX. This appears to imply hat Microsoft does
not have the legal standing to submit
OLE to a standards organization be-

cause someone else owns it.

The word "open," when used in context with Microsoft, means that it will run on more than one version of Windows in a somewhat consistent fashion. Third parties are expected to provide support for the technology on other platforms.

If Microsoft cannot implement a particular technology consistently on its own operating systems, how can third parties implement these technologies consistently on other operating systems?

I, for ooe, am not bolding my breath while waiting for this to happen.

Satish Rajas Artington, Va More letters, page 30

mComputerworld welcomes comments immlist readers, letters should one of exceed 200 worlds and sheuld be addressed to Paul Gillis, Editor, Computerworld, PO Box 9171, 200 Old Connectical Path, Framingham, Mass. 0130. Fax number: [508] 8175-8931; Internet: letters@cw. com. Please hickube en address and phone

Michael Cohn

Why smart cards don't make any cents

eve home without it." That seems to be the credo these days. Credit cards are out. Cash is obsolete. Instead, there are smart cards - encoded bank cards that work like electronic money. Is this another triumph of technology? Does it spell the demise of dollars and cents? I doubt it. Smart cards oven? mart. I say they won't work.
Then again, I once predicted credit cards would never make it; later, my wife rejevenated the en-

tire industry one Saturday at the mall My advice: Stay off the smart-card bandwagon ed, ask yourself one basic question: When it comes to money, do you really trust compute

They arely perfect. They make mistakes. They foul up phone bills. At the supermarket, they scan squash as two-for-85-cents creamed corn. And it isn't just nickels and dimes; we could be talking al points. What if your emert card sucked out \$89,000 for a frozen burrito? Would sayo Digital cash notice? Probably not, most people in the super-market checkout are preoccupied with trying to slip in coupons for Fig Newtons they didn't buy. won't catch on. How do you

give the kids

There's a healthy anonymity to cash, it trad milk money or hands, no one knows, and everyone's happy. With amart cards, Uncle Sam can track everyleave a tip? thing. He'll know how much you spent at Wal-Mart. He'll know if you got \$75 for your gas grill

at happy hour — and so might your boss, espe-cially if you were supposed to be picking up a cli-ent at the airport at the time.

The net trying to be a stick-in-the-mud. But plenty of folks are going to line up against smart cards, including most of corporate America. Busi-

Worse, if most folks are rel with money, then smart cards will be

How can you tell w u're about to go broke? Will it have a little edome ter? Because without one, I guarantee it isn't until of-ter the prime rib, baked

ato and key lime pie that realize I have only 85 cents left in electronic cash - not even enough to cover va-

And speaking of valet rking, how do you tip e? Or borrow a e) Or give a guy a dol-

lar for washing your wind-shield? Here's where smart do get really ugh. How will

res get veney age, now we rep handle simple, day-to-day transac-na? Can you still give your lid 35 cents for milk-cold to teach my son the value of a foliar. Soon, anks to technology, he won't even know what

nesses are frail enough as it is. They depend on the quarters folks lose in a pay phone. They sur-vive by vend-ocharging 50 cents for Ruffles and then having

the chips stay stuck in the s chine. And it's money that de termines every tough call a chief financial offi-cer has to make: "Heads

we downsize; tails we go for danish."

I've got nothing against high tech. But when it comes to money, trush electronic cash! Souff out ed old U.S. of A., legal

plays "In God we trust and "E pluribus unum. Although, soon enough, even that and a puarter won't get you a cup of coffee.

out everyone takes his smart cards now — including

-Kathryn Korostoff

Desktop video is coming. Really!

rious business tool unaily get the same recep-tion as people who say they were abducted by al-ens; polite sileace at best, public humiliation at worst. But I'll be brave and say it: Desktop video is coming and in a very big way.

at a garage sale. And he'll know you dropped \$30

If you've given up waiting for desktop video, it's time to brush off your telescope and look again. The desktop video planets are finally aligned.

was too. But in a recent survey of 270 U.S. businesses, my firm found that 19% already have deplayed deaktop videoconference ing. That's a significant minor ity - especially given that the surveyed businesses were from

s cross-section of industries This time. not just government test labs or well-end PC video-Perhaps more impressive, another 47% report-

conferencing ed that their organizations plus to deploy deakts is finally video by 1999. The scope of deployment will vary, not all will provide video on most workers' deskcheap enough tros. But even when video is initially limited to for corporate the select few, it will spread quickly. Just as the use of electronic mail grew quickly from a novelty America to a norm, so too will vio For some, that 47% may sound too high. Is this

just wishful thinking on the part of IS executives

eager to push their organizations into the 21st century? No, I think it's fairly accurate. A lot of pieces are finally is place that make desktop video far more feasible — and cost-effective than it was in the past. First, products are available that can add video-

og to a desistop for less than \$1,500 ors with desktop video packages in that price range are Creative Labs and late! And desktop video cameras have come way down in price: Toshiba has a model that ts for \$259.

In bundles Second, leading PC manufacturers are starting to bundle desktop video with their PCs and servers.

q, for example, plans to incorporate latel's Compag, for example, plans to incorporate later's Video Phone in its PCs to provide video over ana-log telephone lines. Such bundling will lead to a eroots adoption of video, which will further over the internet Protocol. So next year, we'll over the internet. That, too, will feel the grass-

we corporate use. Third, video may ride the met/intranet wave. Several companies — Intheir networks, which just happens to make th more video-capable. Many organizations are de-ploying switched LANs, resulting in 10th bit/sec. ets either shared by very few users or, it

Other cases, having just one user.

Although those organizations may not be de-loying switched LANs specifically to support eo, they certainly will take advantage of the additional bendwidth by using it for video. In fact, the same survey found that 77% of organizations deploying switched Ethernet are also deploying

As end users start to get PCs with video bun es, IS executives will have to prepare their orga-nations for a deaktop video sneak attack. It will increase RAM requirements and LAN traffic loads and will tax wide-area networks. And yet the video traffic will be hard to monitor and manage because it will look just like IP or regular and

But there are two ways to ease the pain. Set solicies and standards for deaktop video use to seep it from disrupting LAN and WAN traffic. And prepare help desk staff for a deluge of calls. IS managers might as well embrace dealthe rideo because it will be impossible to forestall.

Karastoff is president of Sage Research, Inc., a market early firm in Natick, Mass, Her late

The fourth major planet to alien itself is the SEPTEMBER 16, 1996 COMPUTERWORLD

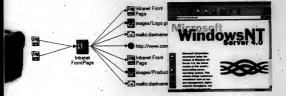
Microsoft Windows NT Server 4.0

lets you build



an intranet

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Microsoft^{*}

Viewpoint

Readers team up. debunk object myth

I gather your publication is still pro-mulgating the myth that object datanes are not ready for prime time ["Object

ses lag," CW, Aug. 191. Perhans if you had really done your homework you would have discovered what is really going on in the market. I am

nications companies. The fact that these systems are provi so good must be one of the better-kept secrets around. They are providing significant competitive advantage to the componies that deploy them.

It may also have escaped your notice, but

I full to understand your motivation in lissuading a large body of corporate comer users from using better, cheaper and ster technology that could significantly enhance their businesses.

> Object Focus Catertine Calif

I was stunned to read that Computerworld continues to promote a myth: that object databases are unstable and don't scale as well as relational databases.

This is just inaccurate and ignores the forts

I have been covering the object datal industry as an analyst associated with International Data Corp. for the past four years.

During this time I have continued to find a ng trus time I have continued to find a tantial and growing installed base of deployed 24 by 7 applicati

In speaking with ODBMS users and visit ing with several sites, my findings show that object "Object databases scale databases very well. Many of the database are ready are larger than 100G bytes; sevfor prime eral are between time."

300G and 500G bases are ready for prime time

and have been

for several years. They are more ad databases in several areas, including replication, distributed processing and data management, schema evolution, version ing and, yes, handling user-defined and multimedia data types. Yet you make no

on of these can Many companies with mission-critical oplications are building them on object stabases, simply because relational data ases cannot provide the performance, scalability or features required by these new applications.

Joshua Duki Stillpoint Consul Cambridge, Mass.

I am disappointed to see that Computer world is continuing to sorread the myth that object databases aren't stable and don't

scale as well as relational databases. I have been writing a series of manag ment briefings on companies that have successfully deployed applications using object databases. In the 23 companies I have studied so far, five use them in 24 by 7 appli-cations. The average database size for the group studied has been between 1G and 99G bytes, with nine expected to be in the 100G-to 499G-byte range within five years. The fact is that object databases are sta-

ble. Companies have mission-critical appli-cations in place using them. And if your application requires complex data, object databases scale better than relational databases and will provide better

performance.

Douglas K. Ba rry & Associates, Inc. Burniville, Minn

the principal of an object-oriented contract engineering and consulting company. I observe that all the new, interesting and different applications being implemented are using object database systems, not relation-I suggest you look at what is going on

two object database componies, Versunt and Object Design, recently went public on

the strength of improving revenues.

with the World Wide Web, finance and tele-

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act Carolyn Medeiros, Publishing Services Director, Boston 1-800-343-6474





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tS managers take a closer look at network computers, 42



Standards scuff

Users will win storage device interface row

By laikumar Viiayan n ongoing struggle between two vendor groups could soon re-

sult in much improved and lower-priced interfaces to storage devices. A storage device interface lets users tape drives, ogtical devices and printers to PCs, servers and larger computers The new technologies will let users con nect more of such devices over longer ces and at much higher speeds

than current technology allows. On one side of the standards battle are proponents of an IBM-championed interface technology, Serial Storage Architecture (SSA). On the other side are industry beavies, including Hewlett Packard Co., Seagnte Technology, Inc. and Quantum Corp. They are pushing Fibre Channel Arbitrated Loop (FC-AL) The current SCSI technology

transfers data at speeds between 10M byte/sec. and 40M byte/sec., while SSA supports 80M-byte transfers and FC-AL supports 200M-byte transfers. The su tially higher bandwidth of the serial technologies allows data to be accessed and transferred from storage devices over the network more than twice as fast as SCSI de

Vendors have already started to asnounce products that use both interfaces, but analysts don't expect.either technology to hit mass volume for an other year at least.

Regardless of which side gains wider industry acceptance, customers will win, analysts said. of this for the end user," said Michael Peterson, president of Strategic Re-

arch Corp is Senta Barbara, Calif.
"The entire industry is focusing on growing the performance characteris es of device interfaces," and cust will benefit from things such as higher dwidth and greater connectivity

over the petwork, he said. ndors' efforts to move to these ner that SCSI technology may be stretched to the limit in today's data-intensive ap

m to drive a lot more b

Yankee Group in B The difference in speed is cru cial in several multimedia applica-tions, digital video and World Wide Web-based applications that involve the rapid transfer of lots of

SCSI may also soon start hitti the wall in other areas. For instance, because of their relatively low bandwidth, SCSI interfaces. can support only about 15 devices. Both PC-AL and SSA allow up to 126 devices. Similarly, in most in

stances, SCSI requires that each of the devices be no greater than 3 meters apart. SSA and PC-AL each allows dis ces in excess of 20 met A report last year by Internationa

Data Corp. in Framingham, Mass., also pointed out that the cost and cur some nature of SCSI cabling and device ters could become incres

Food company takes fresh look at its data

By Michael Goldberg WHERLISO ILL

Three years ago, the managers at Orval Kent Food Co. felt as if children to a parent company that treated routine information reouests with only slight interest.

But now Orval Kent, a maker of refrigerated foods, views fresher data with new eyes, said Dennis Lynch, the company's director of

The \$150 million company is tarting to build a small data ware

ouse that will let it share sales trends with customers such as ermarket chains to show m how they can sell more crab and macaroni salads. In the future, managers plan to ex-amine the cost of incredients that go into its potato salad and other products, said Dan Wartalski, The catalest to Orgal Kent's radual but dramatic change in in-

ation systems fortunes came from an event that some data center managers might dread: being disowned by the parent corpo tion. The former Pet, Inc. in St. Louis (since acquired by The Pillebury Co.) told Orval Kent executives they had 18 mooths after the separation in April 1994 to get off Pet's mainframe systems be-

fore incurring computer time We had to compress what was normally a three-year project into s one-year cycle" while minim ing miscues, said Lyuch, who now privately held, employs about 1,000 people in the U.S. and

In essence, Orval Kent convered the need for a new system into s chance to make its sales and

use of information This deficitely was an opportunity. A lot We didn't get s lot of support. [This IS project] has emp

talski said.

After a couple of months of work-ing with Anderson Consulting. Orval Kent picked System Soft re Associates' business plang and control packages for the 400 as its prime sof rdware pistforms. The software s the key decision, Lynch said, cause it had packages for sales. order processing, manufacturing

The company has limited staff d needs to spend frugally and



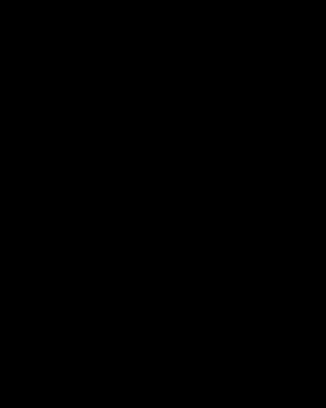
mer her to the combiner's new rest

avoid disrupting business opera staff will soon begin to use Silvon

tions, but the project continues to Software, Inc.'s SalesTracker package to analyze market data. Company officials envision field roll out in phases At the moment, only headquar ers staff can study sales informa representatives being able to go tion in the growing data wareonline to understand sales trend-more quickly than they could be poring through pages of week-old

of company history that takes up 6G bytes. Eventually, the compo-In addition, Orval Kent plane ny will provide remote laptop ac cess to its field representati study the effectiveness

And Lynch said his field sales M. COMPUTERWORLD



Standards scuffle

Users will win storage device interface row

n ongoing struggle between two vendor groups could soon re-

sult in much improved and lower-priced inter faces to storage devices. A storage device interface lets users. connect disk drives, CD-ROM drives, tape drives, optical devices and printers to PCs, servers and larger computers The new technologies will let users connect more of such devices over longer distances and at much higher speeds than current technology allows.

On one side of the standards battle are proponents of an IBM-championed interface technology Serial Storage Acchitecture (SSA). On the other side are industry beavies, including Hewlett Packard Co.; Seagate Technology. Inc. and Quantum Corp. They are pushing Fibre Channel Arbitrated Loop (FC-AL)

technology (see chart). The current SCSI technology transfers data at speeds between 10M byte/sec. and 40M byte/sec., while SSA supports 80M-birte transfers and FC-Al. sumorts 200M.http://ransfers. The substantially higher bandwidth of the

serial technologies allows data to be accessed and transferred from storage devices over the network more than twice as fast as SCSI de vices can support. Vendors have already started to announce products that use both inter-

faces, but analysts don't expect either technology to hit mass volume for another year at least. Regardless of which side gains wider industry acceptance, customers will

win, analysts said. "There's a very positive upshot in all of this for the end user," said Michael Peterson president of Strategic Re-

erch Corp in Senta Barbara, Calif. The entire industry is focusing on aproving the performance characteris tics of device interfaces," and customers will benefit from things such as higher bandwidth and greater connectivity over the network, he said.

Vendors' efforts to move to these new serial technologies come amid signs that SCSI technology may be stretched to the limit in today's data-intensive ap

plication environments, analysts said. Systems vendors are looking at these technologies because they will "allow them to drive a lot more bandwidth, said John Webster, an analyst at Th

Yankee Group in Bosts The difference in speed is cris cial in several multimedia applica tions, digital video and World Wide Web-based applications that involve the rapid transfer of lots of

SCSI limits

SCSI may also soon start hitting the wall in other areas. For in stance, because of their relatively low bandwidth, SCSI interfaces can support only about 15 devices. Both FC-AL and SSA allow up to 126 devices. Similarly, in most ines, SCSI requires that each of the devices be no greater than 3 mes

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Sharing trends The \$150 million company is starting to build a small data water house that will let it share vales trends with customers such as supermarket chains to show them how they can sell more crab and macaroni salads. In the future, managers plan to examine the cost of ingredients that en into its notate saled and other

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In essence Great Kent converted the need for a new system into a chance to make its sales and manufacturing managers more

use- of information. This definitely was an opportunity: A lot of times [under Pet] we were like orpha We didn't get a lot of support. [This IS project! has empowered us a lot more," War talski said.

the separation in April 1994 to get off Pet's mainframe systems be-

After a couple of months of working with Anderson Consulting Orval Kent picked System Soft ware Associates' business plan ning and control packages for the AS/400 as its prime software and hardware platforms. The software was the key decision. Lynch said. because it had packages for sales, order processing, musufacturing

nov has limited staff and needs to spend frugally and



ware Associates was key to the company's new system

avoid disrupting business operations, but the project continues to roll out in phases At the moment, only headquarters staff can study sales informs. tion in the growing data ware-

house - it has about three years of company history that takes up 6G bytes, Eventually, the compony will provide remote knoton access to its field representatives

And Lynch said his field sales

staff will soon begin to use Silvon Software, Inc.'s SalesTracker package to analyze market data Company officials envision field -representatives being able to go online to understand sales trends more quickly than they could by poring through pages of week-old

In addition, Orval Kent plans to study the effectiveness of its promotions spending with distributors.

(www.computerworld.com) SEPTEMBER 16, 1996 COMPUTERWORLD



Cost of scalability

e cost per user in manufacturing and insurance unles is at least 1.6 times lower for mainframes than for Unix servers

GHILL NEW COLUMN	har a same	100 THE UNIT
-	Saturday Dis parer	BLOS BLOS
	Controlled the server	55.7% 54,288

Rase: 273 companies that perform transaction proc

DEC line courts NT products

Follows trend to bundle options

By Jaikumar Vijayan There's a new religion called Win-

dows NT at Digital Equipment Corp. these days, and the pews are filling up. Continuing its efforts to por tray itself as the vendor of choice

in the crowded Windows NT market, Digital last week announced a of Intel Corp.-based PCs. mobile comput-

and servers, all

ming the latest version of Mi-

where it is going to be used across he said. Other highlights include the · latroduction of new powermanagement and hot-docking caijties on Ultra II notebooks. · A new version of ClientWorks,

Digital's client management software, with better reporting of as-

set management information to a

company's actwork administra-

tion and software server. Also, a

new version of ServerWorks Man-

ager, Digital's management soft-

chatered servers and interration with Digital's Desktop Manage-Interface-based Client-

Works software. Both are avail-

readying a new family of high-end Windows NT-based personal

able immediately Digital also announced it is

ware, including remote paging management of Windows NT

make it easier for users to imple-ment Windows NT across the en-

Yet Digital's announcement is

olikely to translate into dramatic

sales for the company, said Joe

Ferinzzo, an analyst at Technol-

ouv Business Research, Inc. in

"Certainly the trend is there,

but Windows NT

is not at the vol-

ampton, N.H.

Across the enterprise The highlights of the amounce-ment include the availability of Ultra II notebooks prebundled with Windows NT 4.0, Celebris FX Pentium desktop PCs with similar options and the extension of Windows NT 4.0 support to Digital's systems and network

The Celebris FX family features 133-, 166- and 200-MHz Pentium with prices starting at \$1,749, the company said. Cele-bris GL models include 180- and 200-MHz Pentium Pros and feature integrated Matrex grap and built-in audio support for Universal Serial Bus. Prices for the GL start at \$2,609. Both models

are available immediately.

The rediout gives Digital one of the most integrated Windows NT product lines in the industry and highlights a trend among several PC vendors to offer users bundled Windows NT options across all product categories. Such factoryndled options are supposed to

COMPUTERWOOD SEPTEMBER 16, 1996 (mar

workstations. The workstations will be based on the Pentium Pro microprocessor and are expected to be unweiled later this quarter, Information from an IDG Wire Service report was included in this story.

IS managers mull network computer

Michael Goldberg

Information systems manager have donned their Durwinian thinking caps to determine if the new animal appearing on degle toos - the network computer is an evolutionary step forward or backward.

Although much talked about network computer devices are just beginning to hit the market, with IBM recently throwing its hat in to the ring with its Network Station. The devices are attractive to IS managers because they offer the hope of cutting the cost of PC management, with most of the resources for the devices handled centrally, said Steve Auditore, an

analyst at Zona Research, Inc. in Reduced Clay Calif Zone said the five-year cost of ownership of 15 PCs connected to a Windows NT-based server is \$217,663; the five-year cost of 15 network computer devices would be 984 368 a 578 savings.

And users seem intrigued by the concret, Dennis Bosma, IS director at Kahler Realty Corp., a hotel management chain in Rochester Minn, said be plans to evalume levels yet uate whether Network Station could ease his PC LAN-manage ment headaches. The potential is

PCs, then 486 PCs, then Pent PCs. You're constantly adding more memory and disk in your PCs to get performance," Be said. "I refer to it as the money pit. This [device] should eliminate

> Not everyope sees the devices as a cure-all. There is too much hype in gen

eral around-the network comput-er, said Gregory Wester, a research director at The Yankee Group in Boston. Network Start or any network computer device - won't mean very much up til theer is enabling software These new storage-less desk-

tops need software to deliver ca-publities, whether simple spread-sheets or more apphisticated ocations, he said. This [kind of] box certainly is capable of providing access to the [World Wide] Web, But what we'll need for this genre to work in a porate environment is a terminal that has the appropriate network" capabilities, Wester said. "At this point, I doubt there are a lot of IS managers that would flock out and buy it - because ere's no software for it." Several firms have annou

network computing devices.

Among them are the following:

HDS Network Systems, Inc.
in King of Prussia, Pa., has been shipping its @workStation since June, with prices starting at \$750. • Wyse Technology, Inc. in San Jose, Calif., is shipping its Winterm terminal as an internet de

term terminal as an internet de-vice, with prices starting at \$500.

Boundless Technologies, Inc. (formerly SunRiver Data Sys-tems, Inc.) in Austin, Texas, has amounced Boundless Network Computer, with prices starting at

eJCC USA, Inc. in Pale Alto Calif., plans to offer an internet communication device designed for use with a TV or monitor for

• IBM's Network Station was de signed for connection to OS/2, System/390, AS/400, RS/6000 and Windows NT servers. It is compatible with other Unix serv ers that support X Window Sys-tem capabilities. Accompanying server software gives file server and over management functions

Briefs IP adds Pentium Pro leuten-Packard Co. in Palo ho, Calif., bus added three

LX Pro 6/200, a 200-MI ighend system is the Net-erver Life Pro, a smaller v on of the LX Pro. Pricing for \$30,900 for a system

of system is the LR Pro, a drange Pentium Pro serv

So (10- (4) o (1)



Single-chip alliance's appeal

by Sarricans accompanies hope a new industry alliance will make it easier for them to pack more functions onto a single chip. Thirty-six semiconductor, systems and design automation software communies have signed so to the systemon-acting allsace. Members include Cadence Design Systems, Inc., Mentor Graphics Corp., Sysopsis, Inc., Cirrus Logic, Inc., VLSI Technology, Inc., Sun Microsystems, Inc., Silcon Graphics, Inc., Sony Corp. and Toshiba Corp.

One goal of the alliance is to develop standards that will make it easier for members to exchange "soft cores" — high-level logic-building blocks, such as an MPSC video-stream decoder or a microprocessor — that can be linked on a single chip, socording to a member of the alliance.

The idea is to "allow companies to mix and match intellectual property from different sources and then integrate it onto a chip," and a spokesman for Cadence, a de-

sign automation company in San Jose, Calif.
Packing more functions onto one chip is important for products such as celular telephones, video games and other consumer electronics that need small components, the undersona said.

There is no easy way to integrate cores designed by different manufacturers ooto a single chip, said Dean McCarron, a principal at Mercury Research, Inc. in Scottadale.

Aris.

For example, if designers want to use a graphics controller from one vendor and a microprocessor from another vendor, they have to use two chips, McCarron said.

Smoother integration

Each vendor has different areas of special-

Each vendor has possessed as a securioristic of the control of the person who is doing the design to pick the best technology for each particular part of the problem" and still integrate the functions on one chip.

The allisance will also look at licensing

The alliance will also look at licensing issues, something that mother analyst said is key to its success. Now, if two different functions are on separate chips, both marshcurvers produce chips and get revenue. But "we're now moving to the direction where we're going to have one chips' said Jim Feldhan, president of Semico Research Corn. in Phoenic A.

"Somehow these companies are going to have to decide who's going to make the chip and how the reveaue is going to be split between the two companies," Feldhan

Kalin writes for the IDG News Service In Boston.

Storage

CONTINUED FROM PAGE 41

Further, as media transfer rates increase, SCSI buses could be saturated quickly, the

report said.

Still, SCSI won't go away completely any time soon, analysts said. For most PC and file server applications, current interface technology is adequate.

And advances in SCSI interfaces — such as Fast/Wide SCSI — are beginning to address some of the more immediate bandwidth and connectivity issues, analysts said.



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В

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OKAY, SO NOVITE FOUND A FEW ANALYSIS WHO SHARE LIS VISION.

B I D M



cte Micro, Inc. has introduced Tahor 640, a removable optical storage device. The Irvine, Calif., firm said Tahoe 640 is a 3.5-in., 640M-byte removable optical storag system that weighs less than two pounds ed has a 3.3M byte/sec. transfer rate. Each 3.5 in. optical disc can store up to 540M bytes of data, graphics and files on a single-sided disc. The system works with major industry

tandards for data interchangeability. Taboe 640 is available in an internal version for \$699. The PC/Macintosh external version costs \$799. The removable cartridges cost \$59 each.

Pinnacle Micro (714) 789-3000 www.piesaciensicro.com Eastman Kodak Co. has introduced Kodak Snapshot Photo Scanner 1, a compact color photo print wasn According to the Rochester, N.Y., com-

puny, the product can scan and display a picture in less than 30 seconds The scanner weighs less than two pounds and takes up less desktop space than a mouse pad. Snanshot Photo Scanner 1 requires an IBM PC or compatible computer running



Knowb's Coan scan and display a picture in less than 30

Windows 3.1 or Windows 95 software, 8M bytes or more of RAM and a standard VGA

nonitor with a 16-bit display card.

A CD-ROM drive is needed to install the Snapshot Photo Scanner 1 costs \$199.

Enstman Kodak

(716) 724-4000 srave.hodak.com

IRM has announced the Antisa CSV Video

According to IBM's Consumer Divithe C6V Video Phone, equipped with Intel Corp. ProShare technology, allows two way audio/video communication over an ordi nary telephone line.

It offers a snapshot feature and large and small video windows. It was designed to let users see and speak with anyone who uses a video phone that complies with the new H 324 standard.

The C6V Video Phone includes a video camera, modem and con ware from IBM. It costs \$2.849. ► IRM

(919) 517-2430 street they care

Smile International, Inc. has announced two monitors, models CB6536SL and CB6736SL



Smile's CB6536SL and CB6736SL m nte 832-visel reno

The Costs Mess, Calif., company st both monitors work with Macintosh sys tems and generate 832-pixel resolution im-ages at a refresh rate of 75Hz.

Each monitor has a power me system to reduce electricity con a monitor isn't in use. Model CB6536SL, a 15-in. monitor, wif

be available late this month. It will cost Model CB6736SL, a 17-in. monitor, will be available in October. It will cost \$778. Smile International



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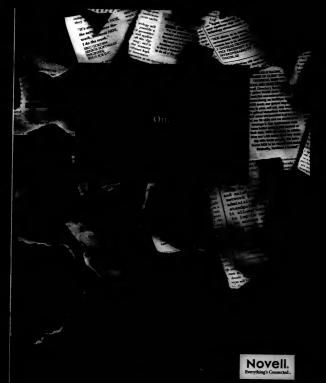
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And the companions from the filterings through the problem of the companions of the

Pure Atria to sut ocesses for building software, 54

IQ Software gives out its reporting software for free

By Sharon Goodin

Q Software Corp. is taking a page from Netscape Communications Corp.'s book and giving away 50,000 copies of its intranet

reinning today. 10/Live Web in spail

GLOBAL SPORTS Report Mess

able for free at IQ'a World Wide Web site

(www.iqs.com). As part of the isuach, IQ is teaming with 100 to 200 coosulting companies and service providers, giving them specific training in IQ software and making need help installing the software. The catch: The consulting and other services

aren't free. er at Boston-b

Publishing, which has ut 15 overseas offi bley said he esp es using IQ's soft his company's previous method, "which was do-

ing the report, printing it out and sticking it in a [Federal Express Corp.] envelope to send to our re mote users and sales staff. We easily spent hundreds of thousands of dollars a The free software can

be downloaded from the Web or ordered as a CD-ROM. It allows a person to query a database, creste a report and post it on a server. The report can then be accessed over the internet or

IQ/Live Web started sh IQ/Live Web, page 54

Software firm alliances come a dime a dozen

IS managers must decide which are for keeps

bot on partnerships the days. The challenge for rare vendors are vers enge for intion systems manag ers is deciding which part nerships are truly long-term and which ones are little

more than prom dates. Take Red Pepper Soft ware Co. in San Mateo Call. On Aug. 12, the sup announced a joint project with Oracle Corp. Under the deal, which is called Project Sour, the part promised to give users

"suprecedented integra-tion" of their respective client/server applications Then, two weeks ago Red Pepper merged with PeopleSoft, Inc., an Oracle ival. PeopleSoft touts the Red Pepper planning and scheduling technology as

any of these face value." its new

"You can't take

Which deal is better? So which deal is the more stra whose products are more tightly inte-

between the marriages of com-"You see a lot of ads with the ores dent of one [vendor] company with an arm around the president of an

but you can't take any of these partnerships at face value, said Ron Ferner, director of low-cost busin ms at Can up Co. in Car

fown to a very detailed saive evals tion of products," Fern

fors here so alli doesn't mean it fits said Ral Keiser, presi-

ich means listing your requirem d comparing them in detail be making a decision," be added That's what Chief Informati Hank Delevati did at Quantum Corp., a \$4.5 billion disk drive man-

ufacturer in Milpitas, Calif. emented Oracle's full

You still have to go back to basics

tions, but it passed on soft-ware from Oracle's part-ners. Instead, Quantum's users picked products

"These decisions can make or break one's ca-reet," Delevati said. "That's why your business nirements have

planning and scheduling software and de

prime areas for partnerships between prise and piche software ves before PeopleSoft's purchase of Red Pepper, Baan bought Berclain Group, Inc., a vendor of scheduling software in Quebec. Baso also remains in a joint mership with I2 Technologies, Inc., a

Even vendors acknowledge the diff-culty IS managers face in keeping it all

omer required a top executive of Mans tics, Inc. in Rock Md_ and the pre of its partner comp to sign a guar future support for their integrated products that was written on joint letterhead, said tive vice president of pply chain products

That was one of the savy ClOs, pson said.

Office 97 to smooth collaboration Eases task management when used with Exchange

By Lisa Picarille

Microsoft Corp.'a forthcoining Office 97 is expected to streamline the process of colerating on document creation in all Office applications - provided that users also run Microsoft's Exchange workgroup

Using Exchange in conjun Office 97, due this fall, users will be able to tter manage tasks that fall into a variety of workgroup categories, including information routing, electronic mail, document collaboration, the sharing of information such as lists and schedules and the automation of business processes, Microsoft of 5 cials said.

A user said although his end users could already share Office files over the network, the ability to better collaborate and track changes would be welcome. "These sound like much needed causabilities, since we have a lot of people collaborating on proj ects," said Michael O'Donnell, systems ad-ministrator at Commonwealth Associates.

an investment banking firm in New York that has more than 300 PC users. Office 97's main focus is coll formation. From within all the Office 97 dications, users will be able to autom the time-customing task of routing docu-ments, collaborating on documents, sharing information and tracking changes to

as intranet via a browser.

Peatures within Word 97 From within the Word 97 word pro

application, users will be able to collaborate on the creation of documents, track revi sions and versions of documents, add coments to documents during the editing pro-With Excel 97, more than one user will

be able to simultaneously access a spread-sheet. Multiple users will be able to add. edit, delete and change formating on a spreadsheet. The changes will be tracked and documented and then rejected or ac-

COMPUTERWOOD 16, 1996 COMPUTERWOOD

'net-ready accounting software fits the bill

New software gives executives online access to data

By Thomas Hoffman

Steve Bolick has a vision ecutive information system based on Lawson Software's Internet-ready

The goal is to give top executives at 22 worldwide business units online access to the company's financial data.

Boliek said he knows he can't dawdle. He will have a hell-bent-for-leather" fourth quarter helping the pharmaceptical researcher in Arlington, Va., merge with Pharms Product Development, Inc. in Wilmington, N.C., he said. Meanwhile,

competitor Phoenix Internaploying Lawson's Internet

ready Version 7.0 software. Tr's s race, and we can't let our behind," Boliek said.

Fusion is on Such are the pressures for many informa-tion systems managers who see internet-and intranet-enabled accounting software as a means to simplify the distribution of financial data to internal and external

Interim Technology, a Lyndhurst, N.L.

any that provides IT staffing to Fortune 1,000 companies, would like to make As manager of corporate information line "and take a big load off our billing and schnology at Applied Biosciences Interna-oual, Inc., Boliek wants to develop an ex-

> laterim has been testing nts Receivable Release 5.0. World Wide Web-enabled software from Software 2000. Inc. in Hyannis, Mass. since July. Account managers at the company's 31 U.S. branches use the software to check cus-

Account managers at Interior who use the Software 2000 package can access custom information from the com

ny's IBM AS/400 midrange system in Lyndhurst through dial-up connections to local Internet service providers. Because Interim's field staffers don't have to connect long-distance to the AS/400, Lucas said he

expects the software to pay for itself "The World Wide Web is great for razzle-

use graphics, but we need real-world sinces applications," Lucas said. "This [accounts receivable] package is consistent with that philosophy." Lucas said he expects to have the software running on



the AS/400 by year's end.

Indeed, most companies interested in distributing financial data over the Internet want simple, easy-to-manage tools 'to ge perically access information for review and analysis," said Ed Biack, director of client/ server technology at Aberde

Black said, includes Spider-Man, an intranet-based accounting system from Hyperion Software Corp. in Stan Conn. Spider-Man delivers query re



Software to target business

By Torrsten Busse MUNICE OFFMANT

IBM will incorporate business, legal and fiscal requirements specific to Europe in its lication framework for business man ment software as part of a recently as suced development initiative.

IBM will implement European r sents related to accounting methods, inter national currency

Application

date specif and tax rules in its development AS/400-based bas software. The software is sold in Europe under the brand names MASSO in Germa-ny, DKS in Austria, ACG in Italy and PG

called the San Francisco Project, IBM is cooperating with 50 international development partners on the design of Java-based, object-oriented application frameworks for building large-scale bus

The industry-specific frameworks will over areas such as distribution, logistics and financial applications. They will be buil using a series of reusable object-orien

IBM didn't announce availability of the

se writes for the EDG News Service.

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Web technology firms up Office 97 to smooth collaboration document management

By April Incoh-

The World Wide Web is becoming an in creasingly popular enabler for traditional document-management technology, mak ing access cheaper and simpler for users. As companies provide more remote to

ees and become more global in opcratiues, it is important for users to be able to work in groups and view information as if they were in a central location. analysts said

Web-enabled document - mai agreent is a key piece of technolone designed to give companies

ment software futallante / Rusin on lets Wich were

get information from outline repositories. that ability, said Scott McCready, a princi-

pal at International Data Corp., a research arm in Framingham, Mass Product design engineers at Ford Motor Co. have their eye on a method to get new or revised electronic systems specifications

for Ford cars to plants around the globe using Intellecte Businesa Web software from Waltham, Mass-based Interleaf Inc.

Cart Swick, a product design engineer at Ford, said key assets in his department are the tracking of those documents when the ability to control who can revise and

are the right people get those documents The fact that we don't have to make hun deeds of comes makes it a lot easer for us

and from a theoretical standaring nothing should be able to full through the crack-We think it's get great peters

tial "hy saud Document management and [intranets] are a natural St." said Carl Franceolo.

tics, corporate systems developers who are vice president at Delphi Consulting building custom work Group in Boston group solutions can cre "It lowers the barate forms or applications to streamline their rices" Francisco esis tracking applications.

riban. Web gives rasy acress to in formation, but the signed forms and applications that can also controls inherent in a document-manage be customized. But users will also be able ment system - which controls users' ac cress to documents as provide security

"The last thing you want is for a party to dial in and get an old version of what they need tu see," he said, Applications such as those at Ford car also save large amounts of labor. McCreach said. He said his research shows that up to 25% of document labor can be attributed to

cluding phone lists, con

fact names and schedule

Using Exchange with

Outlook, an Office 97 ap-

plication that provides

messaging and informa

Making It casy

information

Besides document collaboration. Office

97 adds Microsoft's Instant Groupware facilities. Most of those features convist of predesigned templates and prebuilt structures for managing themost commonly shared types of information, in

pware features of ce 97 when used with Exchange

current collaborati

business processes. These may include discussion databases, document libraries and Microsoft plans to provide several prede

report created in Excel, place them in an Exchange public folder and share them with other users. An artifiest said the capabilities offered

by Office 97 are so significant that users. should get un board as soon as the product is

available "Office 97 is a major leap forward and may be the reason users are go-

ing to want to deploy it. even if it means making the commitment to move from Windows 3.x to Window NT 4.0 or Windows 95," said Dave Ferris, president of Ferris Research, a market research company in San Francisco.

New Products

PCAD, Inc. has introduced FelixCAD a three-dimensional computer-aided design (CAD) software made specifically for Windows NT and Windows 95.

According to the Novato, Calif., com ny. Felix(AD incorporates Windows Multiple Document Interface. Users can view and edit up to four drawings with up to four views per drawing at once, for a total of 16 open documents on screen in any combination of two or three dimensions.

Pricing for FelixCAD begins at 8595 ► FCAD (415) 893 1240

www.fcad.com Easy Analytic Software, Inc. has launched The Right Site for the Web. a World Wide Web site designed to help busi-

nesses with demographic analysis. According to the New York software pub lisher. The Right Site can belo businesses. analyze which geographic areas have high concentrations of potential customers. Access to The Right Site for the Web is

Easy Analytic Software (718) 740-7930 www.easidemographics.com

Time Line Solutions Corn. has an munced Project Management Integrator (PMI) for Novell. Inc.'s GroupWise 5. a workgroup software application to provide two-way communication between Group Wise 5 and Time Line 6.5 for Windows According to the Novato, Calif., firm PMI lets teams share project information It was designed for managers to distribute mments and schedule changes from

Time Line to team members via Group Wise's expanded electronic-mail system. PMI is free as part of GroupWise 5. which costs about \$500. Time Line Solutions

(415) 999,1010 serve theirtions con

oftware Publishing Corp. last week announced Active Office. an add-on to Microsoff's forth coming Office 97. It simplifies the process of extracting text and num bers from any Office application and helps create visual representations. of those numbers By highlighting specific text or numbers in the document and ther clicking once in the ActiveOffice Galcally turn into visuals. Previously users needed to go through the tim

Office 97 add-ons

cirments in charting drawing and presentation packages. ActiveOffice's Intelligent Formatting lets users change layouts and color schemes by clicking on a but ton For example, a user could high light a range within an Excel serval. sheet, click on a preformatted color table within the ActiveOffice Gallery. then take the chart or graph that was created and add it into a Word docu-

consuming task of creating visual

A beta version of ActiveOffice will be available online at www.spco.com beginning next month. The final wersion, priced at \$50, is slated for release later this fall, to coincide with the launch of Microsoft Office 97. For optimal performance, Active Office requires a Pentium processo with 16M bytes of memory and a

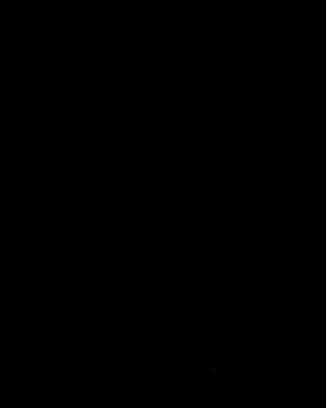
Super VGA (800-by 600-parl resolu tion) display. - Lisa Picarille



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Web technology firms up document management

By April Jacobs

The World Wide Web is becoming an increatingly popular enabler for traditional nanagement technology, mak-

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pail at International Data Corp., a research firm in Framingham, Mass. Product design engineers at Ford Motor Co. have their eye on a method to get new or revised electronic systems specifications for Ford cars to plants around the globe us-ing Intellecte Business Web software from

Waltham: Muss-based Interleaf, Inc. Curt Swick, a product design engineer at Ford, said key assets in his department are the ability to control who can revise and

track documents and the ability to make sure the right people get those documents.

The fact that we don't have to make hun eds of copies makes it a lot easier for us. and from a theoretical standpoint, nothing should be able to fall through the cracks

We think it's got great polen tial," he said. Document. anagement and

[intranets] are a natural fit," said Carl Frappeolo, vice president at Delphi Consulting Group in Roston ate forms or applications to st

It lowers the bar Frappeolo said the Web gives casy access to information, but the

controls inherent in a document-management system - which controls users' access to documents -- provide security. "The last thing you want in for a party to dial in and get an old version of what they need to see." he said Applications such as those at Ford can

also save large amounts of labor. McCready said. He said his research shows that up to 25% of document labor can be attributed to the tracking of those documents when there isn't a management system.

Office 97 to smooth collaboration CONTINUED FROM PAGE 49

Besides document collaboration, Office Exchange publi 97 adds Microsoff'a Instant Groupware with other users. Incilities. Most of those features consist of An analyst sa facilities. Most of those features consist of predesigned templates and probabilistruc-tures for managing the

types of information, including phone lists, contact names and schedule information Making it casy

Using Exchange with Outlook, an Office 97 appacation that provides messaging and inform tice management facili ties, corporate systems developers who are building custom work group solutions can cre-

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tion) display. - Line Picerille

to take existing forms, such as an expense report created in Excel, place them in an Exchange public folder and share them

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"Office 97 is a major rap forward and may be the reason users are poing to want to deploy it, even if it means making the commitment to move from Windows 3.x to Window NT 4.0 or Windows 95," said Dave Fer-ris, president of Ferris

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rate software developers face bigger and more complex projects, they are also getting less time to put the software into users' hands. And that's putting pressure on managers to whip their software develment process into shape.

Hoping to ease that presure, Pure Atria Corp. last week announced ClearGuide, an add-on to the company's popular ClearCase config-



ment system that dard processes for building software. The Unix version will ship in the first quarter next year, with a Windows NT version to follow later, officials at the Sunnyvale. Calif., company said. The Unix version will

cost \$2 700 come very complex. Companies are doing parallel development, and that requires additional coordination," said Howard Cohen, a development strategist at Timefold, a consultancy in Alameda, Calif.

Parallel development - in which sev parts of a project are developed at once by different teams — seems like a natural apoch for client/server applications where each piece of software runs on a difsystems shops have homegrown systems for tracking software oment, but often they don't adapt well to client/server projects. And simply designing a new set of procedures on paper doesn't fill the bill either,

We need ways to docu the (software development) process but also to increase our infor mation-sharing between us," said Fred Krimmel, manager of sys-

uration managetems development at American Hotel Register Co. in North brook, Ill. So developers are turning to

tools that can coordinate the work rogrammers do according to a welldefined process. Such tools include Process Engineer from LBMS, Inc. in Houston, PCMS Dimensions from SQL Softs Inc. in Vienna, Va.; and Transform and SE Companion from SHL Systemhouse, Inc. in awa, Consultants such as Andersen Consulting in Chicago and Coopers & Lybrand in Princeton, N.J., also have tools fo

mating a standard software develop-And unlike the software develop odologies that many developers remember unfoodly from the past, the newer ols automate much of the grupt work as-



create standard processes for soft

sociated with devel Making the development process less haphazard also should improve software

IO/Live Web

CONTINUED FROM PAGE 49 res that range from \$3,995 on Win

NT and low-end Unix platforms to \$19,995 on high-end Unix servers. , Jay Chaudhry, senior vice presid-IQ Software, said he isn't worried about alterating users who already have boug the software. He said the givenway is good for only one client copy of IQ/Live Web Companies that want more clients will have

Ezra Gottheil, a senior analyst at Hurwitz New Products

Blue Sky Software has announced Visua SQL 4.2, to integrate with Vesual C++ Enter

According to the La Jolia, Calif., com-

ny, Visual SQL extends Visual C++ with visual designer, intuitive wizards and

object-oriented data access without leaving the Microsoft Corp. Visual C++ env Visual SQL 4.2 costs \$1,499. The up-grade to it can he downloaded for free at Blue Sky's World Wide Web site.

MathTools Ltd. has announced Matco

V2. a Matisbto-C++ compiler, and C++

According to the Horsham, Pa., com

av. Matcom V2 compiles Matlab source

price Edition and Visual C++4.x.

▶ Blue Sky

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Brief

Group, Inc. in Newton, Mass., said the launch offers information systems manag ers a way to test-drive the software, but he warned that free software isn't the equivalent of a free ride. The cost of the software is zero, but

hat is the cost of learning how to use it and beginning to use it?" Gottheil asked. Herb Edeistein, president of Two Crows Corp., a data mining consultancy in Poto-mac, Md., said the purchase price of software often is a fraction of the overall cost. "It's a matter of training, upgrades, insta tion, time people spend with the software and maintenance," he said. "I'm always du-bious about these things."

es to C++ source code. The C++ code and library were designed to be integrated into products, royalty-free. That eliminates the need to translate the algorithm prototype.

Matcom V2 costs \$300 Math Took (215) 957-1719 www.matktoois.com

Concentric Data Systems has amounced Arpeggio for the Developer, a 32-bit tool to help developers integrate Arpeggio data access and publishing capabilities into cus-

According to the West my, (a subsidiary of Wall Data, Inc.) Arpeggio for the Developer provides three separate application programming inter-faces that provide tools for building infor-mation publishing applications quickly.

Pricing for Arpeggio for the Devel tarts at \$400. Concentric Data Systems

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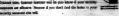
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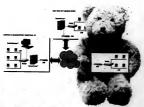
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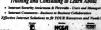
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This time, do Rmon right

Patrick Dryden



Here's hoping wasted network management pootial may be nding. Many big net

is for diagnosing problems on farng segments that administrators n on infrequently, if at all. Until redy, Remote Monitoring (Rmon) is haven't really solved the nealis that network administrators eded to solve. Now, vendors are

rting to extend the tools to monitor ore tasks than ever, and they're tryz to make their tools interoperate. Network administrators need Rmon ils to treat their charges with reect, just as rattlesnake handlers rerd their wards. Both groups watch

astantly for a strike that could prove

Convenient care The Rmon specification defines basis Aformation that can be gathered and resorted about the performance of a Swele network segment. That saves Quetral caretakers the delay and hasof ingging diagnostic gear to a er room, department or field ice when their makes bite.

Without leaving a handy console, plication to track the utilization and ers on part of their network and even capture and examine packets

If they are lucky, that is. Turning on Rmon often fails be-

use of the blind spots caused by stches or the madequate support of eded data groups by some windors' tents, users say. And it strains the

rformance of the gear that an agent supposed to monitor, they complain Vendors have been correcting these oblems in the past year so users can prade agents and modules to realize eir remote fault-management caon-

nded their tools beyond basic segant troubleshooting. They track apcation traffic and conversations yond segments. And those propriary extensions lock in users to a sin ie vendor's embedded agents, orobes

and monitoring application. Many of those extensions have been Rmon, page 65 Dryden is Consultracele's senior editor of

The Enterprise Network

Web-olution

Network administrators use intranets

By Patrick Dryden

he World Wide Web has already changed the way some administrators man age their networks, systems and applications lisers relish the Web's ability to freely distribute manager information that traditionally was

difficult to access remotely or was restricted to gurus who manned a few powerful consoles. Because that ability is so new, there aren't independent measures of how many people take advantage of it.

But so far, so good, users said. "Putting reports on our intranet saves at least four to five hours a week that we used to spend generating paper reports and answering specific questions," said Mona Ellingson, leader of the network management engineering group at Arizona Public Ser-

for info distribution, remote troubleshooting throughout the statewide network, Web access helps software developers exam-

ine the impact of new applications on network traffic, Ellingwon said. Web-based access to network health reports has helped David Brown, direc tor of network services at The New York

Times, get a jump on diagnosing probms before they affect his users.

Brown doesn't worry anymore about what bad news might await him when he reaches work. Each morning, he checks for immediate and emerging perfor-mance problems on his network via a reer-equipped laptop in his bed

Now I can see if something is out of whack from home when I get up in the orning." Brown said. Then he can click on a router interface or a wide-area network connection to bring up a util ees. With this early warning, he can call a central operator to resear

the cause, and he can consider the tools also enable remote access via an X Window System interface. But ons demand too much netw

Intrunet access, however, makes he same data available through a ocation and on diverse platforms. That means broader access to man

Remote access, WAN links in store

By Bob Wallace

vice Co. in Phoenix.

Attendees at Networld/Interno '96 this week in Atlanta will find vendors placing a strong emphasis on remote access and adding long-awaited wide-area petwork

options to their switches. With these easily expandable and m robust remote-access systems, network administrators can add more end users without having to buy a lot of boxes,

Users are fed up with having to buy a new box whenever they need to add ports for more remote neers," said Barbara Masskant, director of information services at Emory University's Goinucta Business School in Atlanta. The first wave of systems dead-ended users, so

new scalable systems without performance restrictions will be welcome." Emory uses remote access to extend



with having to buy a new box whenever they need to add ports for more remote users

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Bay to offer switching modules for System 5000

By Bob Wallace

LAN switching help is finally on the way for the legions who use Bay Networks, Inc.'s Section 5000 hubs.

Years after it promised LAN switching for the System 5000 high-end hub, the Billerica, Mansi, vendor recently said it will phase in delivery of the long-awaited and sorely needed switching modules in the

To use the modules, users must aid a new backplane to their System 5000s. The backplane will cost about \$2,500, not including the cost of the modules.

The modules are based on technology. Buy acquired when it bought Contilion Networks, Inc. last year. They will be rolled out according to the following timetable: • Due in 30 days: a 18-port switched Etheract module that will cost \$2,485 and an eight your version with eachancements. The

eight-port module will cost 88,495.

*Due in 60 days: a 14-port switched Ethernet module with two 100Base-T ports that will cost \$8,395. On the Asynchronous Transfer Mode front, Bay will ship two four-port modules. Prices will start at

 Due in 90 days: a version of the 14-port module that supports 100Base-T over fiber. It will cost \$9,395.

It will cost \$9,395.

Bay also announced a software upgrade that will add routing functionality to the Centilisen 100 and System 5000 switches. It will be available in middle of peat year.

SIEMENS ROLM Communications

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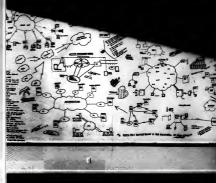
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IMAP gains ground Pulton Sollman Corp. has shippe more than 100,000 versions of its

Emble Internet electronic-mail client, according to the company. Earlish is use of the five commercial climate based on the Internet Mail Accesso Protocol (IMAP), a standard that gives internet and users more options than Port Office Protocol to commerce their in-batters.

Shina Carp, in Dedford, Mann, his nanouscade a suffinare developer's lite. Shira officials said the Shira Die in life, gless developers multiple plates and the second in the second language options, including direct support for C, Vissal Carlo er Vissalt Basic. The left is smith of the second language options, including the second language options. The left is smith care when the second language options in the second language option in the second langu

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The Enterprise Network

New Products

company, Axis StorPoint CD/T can be

used as an intranet/Internet World Wide

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ver plug-in modules.

using any Web browser even if the CDs aren't formatted with Hypertest Markup

The modules also let users access and Axis Communications, Inc. has introshare CD-ROMs over the network withou duced Axis StorPoint CD/T, a family of CDchanging disks. They are based on a 32-bit RISC processor and are fully scalable. According to the Woburn, Mans.

Pricing starts at \$799 for Ethernet and \$999 for Token Ring According to the Suprise, Fla., con Axis StorPoint CD/T will be available by the systems offer routing, multiple med the middle of next mouth. ods of access and restoral and superior per

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inc. has introduced three frame-relay access systems, Fast Frame 200, FastFrame 300 and FastFrame

formance in handling legacy protocols onsolidation of diverse networks.

The 600 platform offers full T1/E1 frame-relay access, two network ports, four

serial user ports and one LAN, either Ethernet or Token King. Pricing starts at 89 Paral De (514) 434-1517

McAfee Network Security & Ma ment has announced Secure-1, a desecurity suite to integrate antivirus pe tion and encrys

According to the Santa Clara, Calif., or pany, Secure-1 includes the following th modules: NetCrypto, VirusScan and Web

Pricing starts at \$125 for one user.

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ski-Tech Systems, Inc. has mno ModernManager, a rack-mounted sys tem to remotely manage modems through Internet browsers and World Wide Web

According to the Mounds View, Minn oany, MultiModemManager includes need V.34 33.6K bit/sec. data perfor-Ever notice how complicated your job's been ace and three/V.17 fa

It was designed with Caller ID and finsh emory.

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at \$15,000 for a customized eight-mod ystem with all the soft

(612) 785-3500 Blockade Systems Corp. has knoounced Blockade Enterprise Security Server and Blockade Distributed Authentication Services for central many ces for central management of ren

Grapted, it's nice to work with a firm that's According to the Toronto con products support Shiva Corp.'s LAN Rover, 3Com Corp.'s Access Builder all Cisco Stratems, Inc. products running IOS, IBM's 8235 Remote Access Server and IBM's LAN Distance The Security Server was designed to reface the number of user-ID password combinations required to access corporate net-Pricing starts at \$20,000. Blockade Suster

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WHERE DO YOU WANT TO GO TODAY?

Satellite links are set to blast off

Technology could bolster networks, connect remote areas | Europe set to OK Motorola-led group

By Ion Skillings SINGAPORE

Satellite technology is on the verge of becoming an alternative to terrestrial internet connec-

tions for parts of the world that Some satellite links will go into service within the next few

months, but it will be several years before the technology ers more substance than prom ise, according to attendees at the ation Superhighway Summit held here recently.

Intelest will offer access in parts of Africa later this year, in the Indian Ocean region by the idle of next year and in the Pacific Islands by the end of next

interconnect initiative (AID), expects to have its first international link, to Indonesia, up and runnis

ry at right).

A link to Hong Kong is set fo next mouth and a link to Thailand for the fourth quarter. Proponents say satellites can

Reaching out A privately funded Japanese ac

detaic project, the Ania Internet

selling switching to more than

just headquarters locations," pre-

dicted Daniel Briere, president of

TeleChoice, Inc., a consultancy in

nies typically don't have much, if

any, technical staff at these amail-

er locations, providing easy WAN

In other show news, Ascend

meds. Calif., will unveil a line of

support in a big plus."

Verona, N.J. "And since com

mercial consertium that owns and operates a system of And the European Commission

readily supplement terrestrial net-works with broadband services voice, video and data - and take se service to places when er-optic and other telecom is getting ready to approve a satel-lite consortium that would be led unications lines don't yet res In developed areas, said iso can offer a "backbone patchby Motorola, Inc. (see related sto ing function, said Segure Ya-maguchi, sp information

or professor at the Nara Institute of Science and Technology

shed in Japan at the one year after the cou try lost a good deal of its lat

backbone capacity because of the earthquake at Kobe — now provide a backup teleco like inteins, the nor

AI3 project is still a test bed for the technology, Yamaguchi said. The construction cost is a major problem. At this point, this kind of business is not feasible on a commercial level." Yamazuchi

Skillings writes for the IDG News Ser vice's Hong Kong bureau.

2000. Another con 2000. Another consortium, Odyssey, is expected to be operational by 1999, according to the commis-

By Elizabeth de Room

The European Commission plans to approve iridium, a 17-member satellite communications consor-tium led by Motorola, Inc., after it first hears comments from all interested parties, according to a recent notice in the Euro-

pean Union's Official The six-page notice provides details of the agreements making up

one-month period for

Iridiam will provide personal digi tal wireless communications ser-vices on a worldwide basis using 66 low-orbit satellites. The sat Ites will be launched in the next 24 months. The entire system is acheduled to be functional in Oc-

Iridian expects to be the first provider of global satellitenel ne mications sysns. Potential competitors Immarest-P/ICO and Globalstar plan to be operational around

though a Global System for Mobile Communications device bought in the U.K. can be used Iridium and allows a ross Europe, its use abroad will be more expensive than if used just nationally. This is due to the accounting among various opera-tors, Owen explained. Iridium will

"One of the key el leidium is that it will be global is

nature so the nationalis

triecommunicati tional Data Corp.

kets that now exist will be com-

search manager for European

nised," said Eric Owen, re-

iminate that situation, be said. The Iridium system will comof a space segment, several gate ways and handheld terminals Gateways are switches that communicate with subscriber ani and other satellites via the conone and serve as the int face between Iridium and the public switched telephone net

morbs

De Bony writes for the IDG News Sec

Remote access, WAN links set \$9,500, respectively. The first

CONTINUED FROM PAGE 57

model will ship next month. calendaring and electronic-mail Frame relay is 30% to 40% less as to remote workers. e than low-sneed privi while enabling them to update lines and is catching on quickly. It is already available throughout databases. These are basic appli-cations, but applying remote ac-North America and is sweet cess to them cuts the time users through Europe and the Far East. need to spend in the office, You'll see more LAN swit Maaskant said. renders follow suit as they begin

At Networld/Interop, Microcom, Inc. in Norwood, Mass., will roll out the Microcom Access Integrator a remote access over tem that is available as a seven or

The Integrator was developed with Cisco Systems, Inc. and 3Com Corp. and includes communications server and router functionality. That means it can be used with other products from the

internetworking due. On the WAN front, the Micro com Access Integrator supports analog dial-up, Integrated Services Digital Network, X.25, frame relay and 1.54M bit/sec. T1 con-

nections The Microcom system will ship pest month with prices that range from \$21,000 to \$125,000. Meanwhile, Xylan Corp. in Calabassas, Calif., recently announced that its low-end Pizza-

Switch can be connected to framereige links Adding WAN support to a LAN witch means remote sites can be

tied directly to corporate net-Xvlan is providing free framerelay software, along with twofour or eight-port serial modules, which cost \$5,500, \$7,000 and

ications, Inc. in Ale-NETWORLD'+INTER®P 96 setwork was signed to solve network con

tion problems that have long plagued Internet service provid The GRF Series Model 400 was designed to offer greater performance than the conventional root ers used widely in provider net

It can forward IP packets at up to 2.8 million packet/sec.; many existing routers forward at less than 1 million packet/sec

The GRF 400 is available with a wide variety of WAN cards that support speeds of up to 622M bit/sec. The system is shipping now with a starting price of \$15,850

application problems across their networks. That is, they can see the snake coiling instead of mer ly dodging a strike or reacting to Internet protocol switches de- bite

> glers would like to work. Their best esses rely or the smooth flow of information, service-level agreements. With the expanded capability of Rmor 2 tools, it's possible to tame the

This time, the vendors are attempting to achieve some leve of interoperability for their prod-

ucts. That means monitoring soft ware from X might interact with Ywagents and Z's probes to track the busiest clients throughout a network by application type. Administrators will be able to

This time, do Rmon right

CONTINUED FROM PAGE ST Hopeful signs will appear this reek at Networld/Esterop '96 in defined as Rmoo 2, a next-ger Atlanta, where vendors plan to tion version that promises to help strate how Rmon 2 tools administrators detect emerging Next week, they will test into operability of their products ac-cording to specific Rmos 2 repairements at a three-day summ n California, Participants will include 3Com Corp., Bay Neiworks. Inc., Cisco Systems, Inc. and Frontier Software Development By year's end, these new and

even more beneficial Rmon 2 nitors should coexist. Then administrators might not ignore the tools, use them only partially, or have to strive to make them work as promised - all of which danusly distract them from watching those study networks

Web-olution of networks

CONTINUED FROM PAGE 57

Web interface to the management worldwide intranet for Turner tools they had integrated. .
"Before, the E-mail sepp Broadcasting System, Inc. can check the performance of his net group waited for users to call work connections, servers and vital applications such as

electronic mail. ommon ground. The

one place to get this information," flary can see the complexity be said Charles Hebert, manager of hind the scenes, he said. "Web resoftware services apport at Turner Broadcasting in Atlanta. Central administrators leveled

thens with problems. Now they're on too of situations in-"Now we're all on memon ground. The intranets whing their sorvers and everyone's network inks," Hebert said.

TurnerView Health Monitor, a

support staff and our users have. Users are more savey now that porting lets us drive the issue of service levels, since we developed a measurement tool before the the playing field by creating need was forced on us," be said.

MILCON) SEPTEMBER 16, 1996 COMPUTERWORLD

A DESKTOP THAT'S ACTUALLY CAPABLE OF



Talk about considerate. Beyond having a thermal sensor that tells you if it's too hot, the new Compaq Deskprowill warn you if its hard drive's about to fail anywhere. It's all part of what we call the next generation of Intelligent Manageability. Among other things, it



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give IS managers a broader range of integrated solutions. And to minimize installation and your configuration

integrated NIC and network-ready soft-

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time, we provide

allows you to take inventory of all your hardware and software from one location. In case of hard drive failure, it backs up your data on the network; and now, thanks to our new PD-CD drive backup, it also preserves your data locally. There's even a sensor in

anyone's tampered with it.

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based on open industry standards that
ensure compatibility and integration
with any network. Our partnerships
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the hood that alerts the support desk if

ware which protects your investment and allows for growth. Ultimately what you get with Intelligent Manageability is lowered cost of ownership. Add to that a three-year warranty, plus dedicated toll-free technical support that's open for business seven days a week, 24 hours a day. Control. It's what makes the new Compaq Deskpto so hot. In a cool kind of way. For more information, visit us at www.compaq.com or call 1-800-392-8883.

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Standards Search Mail, Managing & Discussion Apps	-		
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Server-Rand Janu . & Januarys	~	_	-
Native Support For Oracle, Sylvan, Jeforesp., & ODSC	-		-
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NETSCAPE

Baby Bells out pressure on internet service provider costs, 76

Paper Site's Steele rolls with punches

By Mitch Wagner



aks with the open accent of a California surfe In the early 1980s, while working as a broker and solenman in San Francisco, Strele discovered the Internet noted to get a Radio Shack TRS-100

> Co. deaktop systems. The two computer were incompatible, but they could each talk to servers on the in

Later, Steele said, he worked as a "surf burn, idid and inhe, one. struction, bounced bars - not or my standard resume" - and

orked as a security consult The security firms at wh he worked dealt with the physical sort of security

er than the cor ners. And Steele

ing' bodly networked PCa." It was while he worked as a that he protected

Beware freeware, managers say By Kim S. Nash

Free World Wide Web servers scare IS. Despite the obvious cost-savings of gett products from nonprofit organizations such as Apache or the National Center for Supercomputing Applications (NCSA), most information systems groups that are building intranets pre-fer to buy Web servers from commercial wes-

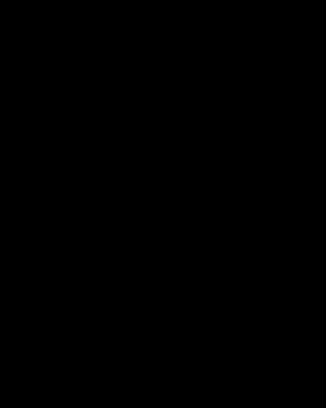
Doubts about the quality - and even the nce — of technical support for freeware keep most IS managers' away, according to

ent informal poll of more than 100 risitors to Computer mid's Web site (www.

uter world.co But turning up its collective nose at freewa can he a costly soub for corporate America, some users and analysts said. *Freeware is a life-saver for comp

ning an intrapet on a tight or nonexistent budget," said Steve Whan, a webmaster at BC Hydro, a utility in Vancouver. Early this year, BC Hydro used several free Web servers to create a prototype intranet for project tracking and em-

White some companies have unurged to support freezers that servers, most users rely on online sources, such as these:		
manuapathe org	snmuskeeb.com/suppers/	
CESS Western.dv	www.com.dy'	
Empose Microsit Windows HT Academic Contro emmac.odu.ac.uh/	To be put on mailing flat, send E-mail to Webserver-nt-request@nust-erve_process_con with "subscribe webserver-nt" in body	
Supermyodig Applications were recausing and a second	nove.ncss.ubc.edu/indices/Web Tack. Docs.html	



Paper Site's Steele rolls with punches

or Matthew Steele, being a webmaster is just the latest adventure in a life that already includes being a U.S. Army airborne ranger, a

bodyguard to the Dalai Lama and selling

fine arts and crafts. Looking back over my past here. I'm hopestly not

quite sure how the beck I got to where I am today." Steele wrote in an electronic mail

message to Combu Steele is a systems developer at Presidio Paper, a

San Francisco brokerage that trades paper in ton-lots to other brokers, who ulti

mately sell it to the nation's breest printers of books

magazines and oth or materials ICW April 22]. He oversees The Paper Site, at

www.copercite.com.an experiment in online trad ing where Presidio Paper and

other printers bid on paper lots. The job is the culmination of a love of computers that threaded through Seele's

other jobs, starting in 1979 when he used

them in the Army. Steele is an aficionado of philosopher and oovelist C. S. Lewis, and he was intrigued by the way computers seemed to embody Lewis' or derly, logical philosophy.

Steele taught himself systems administration and programming from books and through experimentation "Pretty much, I just started pounding on keys and dinking around,

said Steele, who speaks with the open accept of a California surfee. In the early 1980s, while working as a broker and sales. man in San Francisco. Steele discovered the Internet as he attempted to get a Radio Shack TRS-100-

the early portable computer with a four-line LCD - to share data with Hewlett-Packard Co. desktop systems. The two computers were incompatible, but they could

each talk to servers on the Internet Later, Steele said, he worked as a "surf burn, Idid! odd jobs, cup

struction, bounced bars - not on my standard resume" - and worked as a security consul

The security firms at which he worked dealt with the physical sort of security rather than the computer kind, but they did have

computers. And Steele said he "went a reasonable amount of time 'sincrash ing badly networked PCs." It was while he worked as a

security consultant that he protected The Paper Site ame about

ough Steele's friendship with Siri Vedra South owner of Precidio Paper and a com-

panion of Steele's in martial arts training and in Sikh Derma, a religious organization. The two entered into long discussions, beginning late last wear. on how interactive technology could be used to enhance trading businesses such as paper brokerages.

From a start of seven subscribers in the spring, the Paper Sile now Steele, page 72

Beware freeware, managers say a recent informal poll of more than 100

Free World Wide Web servers scare IS

Despite the obvious cost-savings of getting products from nonprofit organizations such as Apache or the National Center for Supercomputing Applications (NCSA), most information systems groups that are building intranets nerfer to buy Web servers from commercial ven-

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Doubts about the quality - and even the existence - of technical support for freeware

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ning an intranet on a tight or nonexistent budget," said Steve Whan, a webmaster at BC Hydro, a utility in Vancouver. Early this year, BC Hydro osed several free Web servers to create a prototype intranet for project tracking and em-

Freeware, page 72

to be put on mailing list, send E-mail to

Per competended Com SEPTEMBER 16, 1996 COMPUTEDWOOD D.

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The feeling's back.

Sure you were nervous when you got behind the wheel, but once you got the hang of it, harreling that baby round the track put you on top of the world.

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IBM, banks revamp electronic services

NEWTORE

IBM and 15 of North America's lacrest banks last week introduced Integrion Financial Network, a home banking service that they said will provide secure

The potential market is more than 60 million banking customers by as early as mid-1997. Integrion's services, which will

initially include bill payments, bal-ance inquiries and fund transfers to banks, don't go beyond the traditional home banking services offered today. However, Integrion's partners said the security ards they are developing with IBM will case customer conceres about conducting transactions over the internet and other

Some 500,000 to 600,000 of Royal Bank of Canada's customers want to conduct transactions on the leternet "right now," said John Cleghorn, chairman and CEO of the Montreal-based bank Integriou's security "is essential to us. We want to hold on to these JOHN E. CLEGHORN

Royal Bank of Canada's John sern: Customers want Internet banking 'right now'

customers," he added.

IBM's Global Network will serve as a gateway for all lategri on transactions Louis V. Gerstner, chairman and CEO of IBM, said he wasn't

sure when lategrion's security and electronic commerce standards will be published, but he said the standards will be open and available to all software and hardware vendors. Each perticipant, including

dollars in Interviou, said James Dixon chief information officer at NationsBank Corp. in Charlotte, N.C. NationsBank and Banc One Corp. in Columbus, Ohio, will utveil pilots early next year.

Recause Interrion's men reversent more than half of the North American retail banking market, the petwork's critical mass will enable it to offer "the cheapest, casiest way" for customers to interact with banks, said John McCoy, chairman and CEO

of Banc One. Service prices haven't been set. Future services will include buting stocks or mutual funds online. Integrion customers will be

able to use a wide variety of fromend financial software, such as latuit Corp.'s Quicken, Microsoft Corp.'s Money and Meca Soft ware, inc.'s Managing Your Money, as well as standard World Wide Web browsers. Access will Internet, online services such as Prodigy, America Online and CompuServe, the IBM Global Network and through Touch-

Outside looking in

Analysts see the venture as an

effort by IBM and member banks to wrest control of electronic banking away from software rivals such as Microsoft and Intuit. But after Integrion begins processing ione of ale

jeopardy include electronic transo processing pion CheckFree Corp. and Visa Interactive, said Phoebe Simpson, an analyst at Jupiter Come tions LLC, a market research firm in New York

Freeware

CONTINUED FROM PACE 69

Pfizer, Inc. and Raychem Corp. also prototyped intranets with

free Web servers but switched to Netscape Communications Corp. products when they put the projjects into production. That is partly because cor

cial products are technology's security blanket, said Tim Sloane, an analyst at Aberdeen Group. Inc. in Boston. "IS knows how to buy products and may have relationships with certain wendors. It feels good to them," Sloane said. vare is a foreign idea to many IS depart Also, many of the latest features don't show up in freeware until

months after they appear in commercial products. And some freeware servers aren't meant to comgete with their commercial brethren, including the World Wide Web Consortium's product, said Tim Berners-Lee, director of the Cambridge, Mass-based consortium and founder of the Web.

Ruther the consortium's product. HTTPd, was designed to show people what they can do with Web technology, Berners-Lee said. "It will demonstrate a set of new features but totally lack some normally accepted fea-

Apache	149.535	37.64%
-10		100
Mount IS	26,739	6.73%
= -	-	
Netscape Commerce Server	25,138	6.33%
	77	100
O'Relly WebSite	sculls	2.64%
Olive .	100	40.00
Total	397,2fs	_

turns "he mid

mile. Sloage said.

Freeware proposents claim that with the original authors of the products just an electronic ask for better, more knowledgeable technical support. And freeware users often form a community. A plea sent to a Usenet newsgroup will prompt a detailed one who has already walked that

from freeware because of concerns about whether they will get help when they need it - or be mail message away, users can't 'able to by blame when applical response within hours from someone and a database" of ques-

"I don't know if a lot of IS pure have really embraced the ootion that other users can be as good or better at answering technical questions as some guy with a tions and atteners, said a webman

ter at a large Kentucky company.

Still users are stating sway

New Products Etak, Inc. has introduced a suite

of Internet mapping products and services for World Wide Web site developers. According to the Menlo Park,

Calif., company, the products in-clude E-Map View, E-Map Route and E-Map Locate. They also al-low map publishers to generate maps from their own individual

The services include EZ-Man, a subscription-based service for

providing geographic locating fea-tures to a Web site, and EZ-Locate, Pricing begins at \$1,000 for one Internet mapping product.

(415) 220,3025 arana, etgk.com

Nombes, Inc. has introduced ScriptEase WebServer Edition, a scripting tool that has an integrat-

remote debugger According to the Medford. Mass., company, the product im-plements ScriptEase language in-

to a Common Gateway Interface, Internet Server Application Programming Interface or Netscap Application Programming Interface language for World Wide Web pages and forms processing on any Hypertext Transport Pro

The product was designed to protect users against stack crashes and memory-overwrit Pricing for ScriptEase Web-

Server Edition begins at \$145. (617) 391-6595 иния потраз, соп

Steele rolls with punches

CONTENUED FROM PAGE 69

Plans are in the works to ex

"It's been slow getting started, but it's hand to get together a trad-ing community on the Internet," pand The Paper Site to include in-Steele said. Nonetheless, he said he remains optimistic and hopes to see aggressive growth through

dustrial paper — cups, plates, nap-kins and cleaning supplies — and mectivity to The Paper Site in systems sold by systems integra-tors that serve the paper industry. The goal: 800 customers by the end of next year.



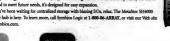
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The solution to managing data across large networks isn't as simple as adding disks or a new server, because generalpurpose file servers aren't optimized for centralized storage. The MetaStor SH4000 intelligent storage hub is. It's all about I/Os and an astounding NFS Ops of 1,350. While storing up to 252 GB, it supports more users and reduces response time It eliminates bottlenecks, automatically backs up and restores, conserves network resources and controls costs

And the dream gets even better. Because the intelligent storage hub includes high-bandwidth RAID, an industry-leading 99,99% data availability, and an integrated five-DLT-drive tape array for 400% faster backup. And to meet future needs, it's designed for easy expansion.

So if you've been waiting for centralized storage with blazing I/Os, relax. The MetaStor SH4000 intelligent storage hub is here. To learn more, call Symbios Logic at 1-800-86-ARRAY, or visit our Web site at http://www.symbios.com.





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Your data-storage costs are soaring.

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Late talk - hate

They don't make coffee. They don't liej jakes. But Storagelik's automatic carridage systems will movow the quality of life around the office from lbg. One. Using high-performance robotics, onsystems back up rinders, load and manage all your disk. And save you a small format, bo. They work in a wide range of distributed computing, who would be supported to the same of the work in a wide range of distributed computing, anytomated, they distribute work so your staff can book so other profittes. For the first time, you can get manistrame storage performance, without the maintainer price. What to find out how much a Storagelike' system can save you? Just 18. 1348 1822-2848, v. 1842 O risks of Wice Salts.



Baby Bells put pressure on 'net provider costs

The Raby Bell's have stepped up their battle to make Internet service providers pay more for telephone lines, arguing that their users overtax the phoor network and have been subsidized for too long

The Federal Communications Commis sion created subsidies in 1993 to spur growth of electronic services over obone lines, including online access. To provide acress, an internet service provider leases a line from a carrier at an average flat rate of \$30 per month and pays nothing for usare because all traffic is incoming from

subscribers. Now, Bell Atlantic Corp., Pacific Bell, Nynex Corp. and US West, Inc. have asked the FCC to change subsidies that let service providers nav a fraction of what a long distance company pays to get a phone line The FCC will review the matter as it revamps phone rates to prepare

for local phone competition. Regional Bell operating companies' (RBOC) complaints are backed by a recent space of surveys and studies iled online The RBOCs say Internet calls, which can last hours use more phone ers. tem capacity than voice traffic for which phone oetworks were designed. Bell Atlantic. in a recent report, cited an in-

crease in dialitone delay and service complants due to taxed switching capacity Subsidy advocates contend that any rate hike would be passed down to business and

service providers that could weather the increase and stay in business. They said the RBOCs are whining be-

pensive switch unwrades I would argue the impact Ithe service providers have on the telephone systemics. next to nil " said Toste Rut.

rector at the Internet Society He is now vice recodent of Internet business develop-Source Seattle Mornatown, 9 ment at General Magac in

But Dave Boast, a division director at UUnet Technologies, Inc., a major backbone supplier and faternet service provider said

Internet traffic is taking its toll on the phone companies. Extended use of dial-up phone lines through central offer switches can result in herey signals or lost dial tones at peak hours, he said "I think it will get worse."

he said "Some systems out there are bending. If they they'll break." Tom Nolle, president of Cl-

MI Group, a consultancy in Voorbers, N.I. argued that the service provider subside that enables chesp, unlimited access to the Interpet should be eliminated altogether



But a flat-rate and unlimited usage is

"[The Internet] is not a societal right it's a business," Nolle said

and networking advance-

ment, others countered "The RBOC1 mind-set that every minute costs money conflicts with what made the Interset possible - un-

limited access," said Nate Zelnick, an analyst at Meck lermedia in Westport, Conn. Nolle and others agreed that one answer for the RBOCs is to remove data from the public switched network by implementing new

high-bandwidth technol ogies, such as Asymmetric Digital Subscriber Line. Those services let. the phone company connect customers remotely via a modern bank and router in the what made the Internet succeed and becentral office instead of via a switch.

Briefs

ctronic commerce se ever, the Best service is cutti

e service costs & a \$500 start-up fee. va libraries for Latte

Borland International, Inc. in Scot Velley, Calif., will license a set of Java class libraries from ObjectSpace, Incuss libraries from ObjectSpace, Inc. in Dallos. Borland will include the pace Java Generic Library with the company plans to ship later this yes for Sun Milcrosystems, Inc.'s Java. Java is an internet development lan-guage. The ObjectSpace Java library in-

ATS T to link Web.

ATAT Corp. plans to launch in October a trial service that links Web pages with sales and customer-support call centers Visitors to participating sites will be able to click on a button marked "call me." Seconds later, they will receive a tive or salesperson at the co ny whose Web site they visited. AT&? won't be first with the technology; Ed

don't do anything about it.

lishing System 2.0, a middleware systhat lets any World Wide Web weer access IBM mainframe and AS/400 applications. The system con Sications and Hypertext Markup page. It will ship by the end of the

opping Network sells Itware

has begun selling 900 downlo software titles on its Web site. The wares include Web develop software utilities, as well as come terms such as games. The ISN Down other software sales site on the interset. including CNET, Inc.'s shareware.com site at www.shareware.com and Cyb Source Corp.'s software pet site at ewe software net. ISN, at www.in is a subsidiary of the Home Shooping Network.

Centura java converter

Centura Software Corp. in Menio Park, Calif., and it will include the abi ty to generate Java applets in its forth coming Centura Web Developer tool set. Centura, which demonstrated the product's capabilities at the Windows NT Intranet Solutions trade show in S Francisco, said developers will be able to convert existing SQLWindows and Centura Developer applications to Juand partition them into applets and server-based Java applications. Pricing hear? been anaromed for the tool set which is slated to ship by the end of th

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Baby Bells put pressure on 'net provider costs

By Kim Girard

The Baby Bells have stepped up their battle to make Internet service providers pay more for telephone lines, arguing that their ers overtax the phone network and have n subsidized for too long

The Federal Communications Commison created ambaidies in 1993 to spur rowth of electronic services over phone ses, including online access. To provide cess, an Internet service provider leases line from a carrier at an average flat rate of \$30 per month and pays nothing for usage because all traffic is incoming from

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mps phone rates to prepare companies' (RBOC) complaints are backed by a recent rate of surveys and studies led online. The RBOCs say internet calls, which can last ours, are more phone sys-m capacity than voice traffic

for which phone networks ere designed. Bell Atlantic, in a recent report, cited an increase in dial-tone delay and service complaints due to taxed switching capacity.

Subsidy advocates contend that any rate
hike would be passed down to business such
liter work should be emissated altogether.

service providers that could weather the increase and stay in business. They said the RBOCs are whining be cause they want to avoid exnessive switch unerades.

"I would argue the impo (the service providers have on the telephone system] is next to nil," said Tony Rutkorski former executive di rector at the Internet Society He is now vice president of Internet business develop-

ment at General Magic in Sunnyvale, Calif.

Busy signals
But Dave Boast, a division director at UUdistance company pays to get a phone line.

net Technologies, Inc., a major backbone
The PCC will review the matter as it resupplier and internet service provider, said Internet traffic is taking its toll on the phone companies.

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product that lets you do all that, but I'm afraid you're not going to hear the details from me."

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High tech creates windfall for Scottsdale, Ariz.

By Gary H. Anthes SCOTTEDALS ASIZ

ne might expect a city where bears and mountain goats room free, trash collectors carry business cards and citizens voted 2-1 last year to increase es to have an unusual information

systems culture We have a history of saying, We don't have to do it the way the other guy does it." said Scottudale City Manager Richard A. Bowers. "We think the private sector has a lot to learn from us."

That pioneering attitude is paying off, people isside and outside the city say. cottsdale has married a homegrown geographical information system (GIS), one of the most advanced anywhere, to a fiber-ootic Asynchronous Transfer Mode (ATM) network. This ma Scottsdale the first city to use fiber-optic ATM. The GIS is lowering costs, improving service to the public and improving management decision-making. navor to cierks to police officers.

Consistent innovators Earler this year, the city used its GIS to prove that federal census figures under

some 9,000 people. A subsequent cor-rection will result in a 89 million windful twice the amount invested in the GIS in added federal payments over the sext five years, according to Scottsdale Mayor Sam Kathryn Campana.

"They consistently show up as innovators in IS," said Cindy Kahan, vice



represents city and county govern-ments. We've seen them come back is year out of a total budget of \$700 GIS at all, use it for niche applications

positioned its GIS — really a suite of ap-enabled business applications" at the center of its IS infrastructure. Vir ally everything the city does - includng zoning, code enforcement, emer gency response, work ma rater management, flood control, build Most city governments, if they have a

Essential data arrives through the Grapevine

By Tim Opellette

For a group of Chrysler Corp. engineers in the com of automobile manufacturing, simplicity is the key.

The Detroit company, one of the largest users of Lotus Devel-ment Corp.'s Notes groupware, needed a way to simplify user access and add value to its slate of Notes databases. Chrysler wanted to keep its engineers updated about an ever-growing on pionering knowledge book housed in one Notes database. Chrysler turned to Grapevine for Notes, software that b on Notes' basic communication capabilities to prune

data to users' tastes and deliver it to their doorsteps.

Analysts say the point of groupware is to get users to collaborate

on projects and contribute to the various databases that contain a ompany's corporate knowledge. But once users start doing this especially in large installations — firms find that the databases ome overloaded, are hard to navigate and ultimately bust pro

"We dish't want the engineers to have to go to the distabase emselves," said a supervisor in Chrysler's technical computer er who requested anonymity. "We needed a mechanism to let By Tim Oueliette

Cone Mills, Inc. wanted a sales tracking system as durable as the denim it manufactures every day. mer/analyst at the Greensbor N.C., firm, that meant quickly go

ing the data salespeople enter into Microsoft Corp.'s Acc ion housed in Lotus Dev ent Corn's Notes pro-

es. That left room for er ror, took time away from their oth er duties and disin't supply other rate groups — credit, traffic international unles — with

After taking a look at its op ons; Cone-Mills tried Prospers on Oberon Software, Inc. Most

Prospero a perfect fit for denim maker

By link database fields in two rent deaktop applications put any coding. Then a Prostically update the correspond g Notes database right away. "It definitely helped us speed

would get the job in once-a-day complete orders a day. "Now sales tomers," he added.

The ability to continue work with off-the-shelf software was important to Cone Mills, which runs 89 plants across the country and

Additionally, Prospero didn't re



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- Explainer: Three ways to access legacy data from your intranet.
- Advice Converse online with Richard Finkelstein, president of Performance Computing, Inc.

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COMPUTERWORLD

The Internet:
Managing
the Connection

By Ready Mysts

Internet access is still a risky and oorly understood resource. IS leaders must provide direction.

mployees at Sony Pictures Entertainment in Culver City, Calif., berter give CIO Steve Heckler a good reason for wanting to surf the Internet. "If someone has a burning desire to explore the Internet, they can do it at home," Heckler says. "If they have a legitimate business need. then we will support them.

But Mark Blumenfeld, Heckler's counterpart at Promega Corp. in Madison, Wis., says it's no big deal to open up the World Wide Web to almost all of the biotechnology firm's staff.

They can buy any book with a corporate credit card, but someday, they'll have to explain why. The same goes for their desktop." Besides, 'my users have more powerful and sexier applications on their TV sets than I can give them at work, so

what am I concerned about?" Blumenfeld says. Heckler and Blumenfeld

are among the IS executives around the country who are grappling with how to manage employee use of the Internet

and World Wide Web Everyone agrees Internet use eventually will he as wide-

spread as that of PCs. But for now, the 'net is still a and illunderstood re-

> for thoughtful mannt. Governing ee use is new terory. Network capacity emains an issue. And riruses, security and ment guidelines are emerging. legal issues are real concerns. Yet Internet access naged at almost 85% of the companies

ce that cries out

according to Ullas Naik, vice president of technology research at First Albany Corp., an

investment firm in Bosto The problem results not from a lack of concern, but from the Internet's rapid infiltratioo of the marketplace, he says. "Some marketing guy in a company needed it to check on the competition, so he signed himself up and expensed the cost. He tells a finance guy about it, and he signs up. Sooo, things go haywire. It's only in the past three to four months that you've seen a concerted ef-

fort by IS departments to rein it in," Naik says. Most managers are still winging it and coming to different cooclusions. Nevertheless, some common manage-

ETWORK OVERLOAD

The question of providing In that currently allow em- ternet access to the masses is inployees onto the Web, relevant if your network can't

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handle the load, analysts say. Inc. in Cupertino, Calif., feeds lyst at International Data Corp. in Framingham, Mass., says that unless IS managers can "convince themselves they have

built a teady-fot-prime-time network and have the staff to man shut off PointCast and support it, they should restrict

access." Internet technology can overrun a system, as many network managers are finding out with such devices as PointCast, net," Hoedeman says. "Things an Internet-based screen saver. This software, from PointCast,

Rick Villars, a network ana- continuously updated news items to a user's PC.

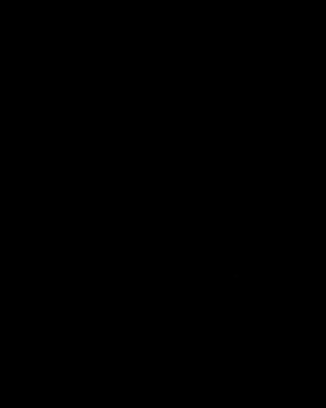
When the corporate network of AlliedSignal Aerospace in Torrance, Calif., began to slow down, CIO Paul Hoedeother noncritical Internet and scale the network m what level network applications to boost the network's capacity. "We zation permits," Kaplan says. have about 4,000 or 5,000 people accessing the external Inter-

that were not business-related we had to shut off."

Network consultant Jeff Kaplan at International Network Services, Inc.'s Quincy,

Mass., office recommends that system managers evaluate their networks before turning on anyone's Internet access. "You need to make sute you can of [Internet] access the organi-

Companies may need to invest in high-speed backbones. new local-area nerworks, remote access equipment and network security and manage-



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Companies may need to invest in high-speed backbones, new local-area networks, remore access equipment and network security and manage-



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ment tools, Kaplan says, They will also likely need to train support staff and possibly hire people to manage the system. However, analysts say generalizing about expansion costs is

nearly impossible because each company's needs vary. "If people are just checking E-mail, you don't need a lot of bandwidth," says Joel Maloff, president of Dexter, Mich.based The Maloff Co., a cornorate Internet consultancy. "If people are browsing the 'net for research, you're getting into a

if you have an engineering group looking for and downloading software, then you're jumping up to a lot more bandwidth."

Maloff's advice to clients is to monitor Internet traffic randomly for 15-minute periods during the course of a week at

"If those links exceed 50%

to 60% during key 15-minute periods, I consider the link saturated," Maloff says. Only 120 of Sony Pictures' 3,000 employees are hooked up

to the Internet because of bandwidth concerns. Network capacity is needed to move massive amounts of data for computer-generated special effects and other applications. "Of our 120 executives using it now, including myself.

we barely have time to get on," greater need for capacity. And Heckler says. "When we do, it's at the end of or late in the day, so we're not competing with other network applications.

"Our philosophy is we are just going to expand to the business needs." Heckler says.

DON'T GO THERE

and the pipe to an Internet ser- lose sleep worrying that em- 'dealt with accordingly."

ployees will surf the day away if they are given unlimited Inter-

According to a recent study of 100 workplace Internet users by Forrester Research, Inc. in Cambridge, Mass., most "wired" employees spend less than 20% of their time online surfing for personal matters. Employees are three times

more likely to surf the Web at "It reminds me of the con-. versations we had at a very large bank I worked at years ago," Promega's Blumenfeld says. "The question then was whether everyone should have

a telephone or not. The managers said, 'If you give low-level people a telephone, they'll talk to friends and family all day."

. . It's the same issue about employees abusing the Internet. If they are, they'te not getting the link between your LAN Analysts say CIOs shouldn't their work done and must be

Perhaps more wotrisome than employees wasting time on the 'net is what sites they visit and what they download

ot post while there. Ronald Boeving, vice president of IS at HealthCare Compare Corp. in Downers Grove. III., restricts Internet access partly because one employee

has already abused privileges. We had one individual in information systems who decided to do battle with someone on the 'net: a vendor he from any dangers that lurk on had a problem with," Boeving says. "The problem was [the HealthCare Compare employcel identified himself with the corporate 800 number, and his

E-mail address identified the Boeving and two other executives decide who receives access and for how long. Of the company's 1,700 employces, about 50 have Internet

COVER YOUR ACCESS To protect your company from

any legal fallout from such occurrences, draft a policy of acceptable Internet conduct, recommeods Bob Chatham, leadership strategy analyst at Forrester Research.

"Handle this like any other [human resource] policy," he says. "Have a written policy ready up front about what applications are allowed. Cover yourself by getting it all down on paper." Include specifics in such areas as damaging statements made on a Web site. copyright iofringements and getting soutce code when downloading software from the

Internet. "You can deal with any problems after that on a case-by-case basis," he says. Policies are needed not only

for legal issues; they also can go a long way toward protecting the internal occupie Worldport LA io San

Pedro, Calif., has offices amund the world that coordinate cargo ships' trips to the Southern California port. The company's CIO, Stan Johnson, wants to make sure his network is secure

the Internet. *I do not bring the Internet to out wide-area network." Johnsoo says. "I'm not going to let Joe Schmo download some virus onto the system and bring

us to our knees. Johnson's solution: Each floor has Inter-

linked PCs that are not hooked up to the internal nerwork. Users who need to download files must go through his department and a string of safeguards meant to

protect the network. "If you're willing to get off your duff and walk 20 feer, you can have all the Inte net access you need,"

he says. "We have not had one problem in a year. It may not be the most efficient [solution], but it is effective."

NO CIO IS AN ISLAND

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City deploys 32M ATM net

IS trailblazing pays off for Ariz. city

CONTINUED FROM PAGE 81

ported by the GIS Geographical in the com mon den Greg E. Larson, the city's chief inion officer. GIS data supports activities in each of the city's three core areas: resource manment, land use and public salety. And the GIS is the foundation of the city's data warehousing and executive information system ar-

Processing shortcuts Karen Hatton, a secretary who belps process 15,000 code epforcement complaints per year, said the GIS and related systems have reduced the time required to research and write up a complaint by 60% to 80%.

Previously, she had to go through several paper files just to find the name and address of a property's owner, then fill out a per complaint sheet and route that to an inspector. That entire

sively to evalu the impacts of alternate ment strategies in the Sonoran Desert. "Of all our systems, the off is from our GIS be cause the city is only one-third built," Bow

covers 32 miles from

north to south, is big-ger than Detroit but has just 175,000 residents. The mayor, who taps in to the GIS from a terminal in her office. said City Council members use

the GIS at incetings to better un-derstand issues that are before it. including citizen disputes. "It's magic," Campana said. "All I can see is bigger and better applica-tions over time."

The citizens of Scottsdale are politically conservative yet enviws, Lan said. "The GES helps balance ecoest and environ-

alism. It's possible to have that win-win if you have the data et it," he said. to support it," he said. Indeed, data accuracy is a hall-

res that accuracy: Six opie on bicycles fi-) with Global Posi-

model. And its dev ers said it is the first to be built using nonpro-prietary GIS "widgets."

The widgets, created by the city, can be reused in Microsoft Corp. Visual Basic applications. The advantage of that approach is the city can easily build on its GIS- foundation without the restrictions and costs inherent in

but that number will reach the

thousands by the start of next er, company officials said.

And Chrysler isn't alone. National

most 8,000 users to participate in

Unique approach Filtering technology is slowly

aductor Corp. expects al-

Cone Mills calls on Prospero

CONTINUED FROM PAGE 8 "It is very basic stuff, but it does what we need it to do," Routh said. uses Notes 3.1,-the

precursor to Notes But because Prospero works fine with 3.1 and the Notes tracking application is also performing



well. Routh doesn't articipate a onick move to 4.0. Users do data entry in Access

rather than in Notes for case of use and more flexibility in reenting the data. Prospero has added links to other

applications. Those include links to Adobe Systems, Inc.'s Acrobst, Lotus' Organizer and Micro-

Grapevine CONTINUED FROM PAGE 81

the engineers know that there is something in the database to look

ers create their own interest profile. Grapevine then tracks multiple Notes databases, finds entries related to a user's interests and notifies the user via an electronic mail message. The relevant docs ment will show up as a hypertext link in the message. Only about 20 engineers are

taking part in a pilot at Chrysler,

making a deat in the slew of E-mail that users must manage ese days, but there has been isthe focus on the same problem in

ware databases. That is why observers say Grapevine for Notes, developed by Grapevine Technologies Ltd. in Troy, Mich. (www.gvt.com), is mique in making groupware easy

But there is still more to be done, observers said — especially by adding software agent technology to the data-entry process for the Notes databases

"Grapevine still relies a lot on the human component," said Deb Furey, an analyst at Collaborative Strategies, a consultancy in San Francisco. "Data has to be captured correctly in the Notes data base in the first place, then you can use Grapevine to escalate the

information to other overs."

A version of Grapevine for Mi-crosoft Corp.'s Exchange Server is also in development

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Career Computerworld survey: Revolving door turns faster for other top executives than ClOs By Alan R. Earls Isn't Over



f you're a chief information officer, you can relax a little. According to a recept. Computerworld survey, the conventional wisdom that CIOs suffer from an exceptionally high turnover rate is obsolete.

The average tenure of CIOs at the 100 companies surveyed is 6.8 years—longer than the commonly believed average of 18 to 36 months.

But perhaps even more significant were results from Computerworld's comparison of CIOs with other top executives at the same

The results from this reality check are starfling. Today's CIOs actually outlast most other top executives. Vice presidents of sales, for instance, stayed at their posts an average of just 5.6 years, while vice presidents of marketing or human resources held their jobs for even less time. Only CEOs were found to outlast CIOs, by a little more than a year and a half.

The results of the Computerword survey, conducted in July, are similar to those of a recent Deloine of Touche mody of CIOs, which pegs the immul turnover rate at 17s. That would mean that roughly one in every six CIO jobs turns over each year. A 1994 Computer over Pressive 100 survey said CIOs held their jobs an average of 6.1 years, six months less than the findings in the July study.

Other sources, however, still hold that, CIO tenure is shorter. Paul Strassmann, a Computer-world columnia, cited a turnover rate of 24.25 in his column June 10. This is an average tenure of 30 months, which he determined based on mailing lists of CIOs from 1994 and 1995.

Many pundits have portrayed CIOs as a

shell-shocked bunch, walking a career path on the verge of a pervous breakdown. While the CIO mantle, like other executive positions, contains considerable risk CIOs and recruiters say that description isn't true.

When "every entity in the organization still depends on IS," it can be hard to be all things to all people says Inexar Petureson, vice president of worldwide chapter relations for the Society for Information Management and CIO of King County Medical Blue Shield in Seattle. But with others in the management suite becoming increasingly information systems survy, some of the stress on CIOs is beginning oate, he adds.

John J. Davis, president of John J. Davis & Associates, an executive recruitment firm in

New York, suggests that if CIOs are beginning to outlast others suite, it may be due to recognition by top ingement that they play key roles in

a very complex job. The investment in technology is so critical and the relationship is so intense [between the CIO and the company] that ole think twice about replacing the leadership," he says. Michael Simm has held successive

CIO positions at Bank of Boston, Bank of America and Fidelity Investment Co. He is now CIO at The Security Capital Group, a Texas holding com ny. Not all those transitions have been smooth, he admits. CIOs must be change agents if they are doing their jobs right

That, he says, means they will always be on the firing line and at risk But Simmons says turnover in the past may have been exacerbated by the fact that too

many CIOs were simply "DP managers in search of a fancy title." He says CIOs now have more business suvvy and better corporate survival skills.

Paul McCartney, manager of the advanced

technology practice at Korn Ferry Interna al, Inc., an executive recruitment firm in Dallas surees that times are improving for CIOs.

Earls is a freelance writer in Franklin, Mass.

"Several years ago, we saw very high levels of turnover among ClOs. It was not uncon to see movement every 18 months to two years," he says.

McCartney credits growing man phistication and market forces for the change. "Now you no longer have CEOs assuming that the grass is greener on the other side of the fence. They don't just reach for a new CIO when there is a problem," he says. As CIOs began to be more critical to corporate success in the volatile early 1990s, McCartney says there was a virtual bidding war for talent. Now the

sarket has become more stable. Davis says his firm's database of CIOs conti ees to show higher levels of turnover than those reported by Deloitte & Touche or Com-

puterworld, but he agrees that ClOs' for nes are improving "The role is evolving, and CIOs seem to be tring a better fix

> sues," he says. This comes at a ine when IS staffs are becoming more terworld's An

nual Job Satisfaction Survey, May 27). Mark Cook, a dire tor of computer ser-

University of Am blames ClO turnover on the same factors that bedevil IS: too many tasks and too few resources. IS staffs have grown cynical, he says, because "ClOs spend the ma

jority of their time entowing to man nest res rather than just say ing no. Nothing is ever a problem because

ome poor techie will perform the impossible. But Frank Erbrick, ClO and senior vice presi dent at United Parcel Service, Inc. in Atlanta, defends his peers. People who aren't part of the profes

to take a more objective view of CIOs and turnover problems, he says. "After all, it can't be that all the CIOs are dumb and all the [chief 6scial officers | are smart," he says,

M. Lewis Temares

Consultants: Get the facts

One CIO's spin on turnover

Our careers aren't over, consultants. Actually, our careers are in overdrive.

easy path to get a contract: Tell the CEO or chief financial officer that the chief information officer function is transitory and outsourcing is the solution. Further, some CIOs are-scared into using consultants because, after all, their half-life is less

than two years. Here's a true story: A consultant told a ser rice president that his CIO doesn't understand the company's business. In addition, he's a has-been cause industry turnover is no months, and he's been around for more than a decade. The only solu tion? The senior vice president should reorga 15, spend millions on systems and get his own CIO Luckily, it didn't happen, because the executive

didn't get scared into a decision. He went out and got the facts As a statistician, I realize the data presented in this Computerworld'survey can't be statistically

when was the last time you saw data refuting the "CIO is dead" syndrome? As Mark Twain would say, the CIO's death has been greatly exapporated. The feer mongers don't say why people change ment, as well as downsizing, mergers or termina tions. But that holds true for consultants, too. What's the turnover rate for consultants? Row

many use their engagement as an entry into a corwate CIO job? sales and marketing and CFOs? Do they realize their careers may be over unless they change? Who regularly looks at the turnover rate for non-IS

Are consultants valuable? Yes. But they must be come partners, not fear moneers. They must be managed, not given free reign. A good consultant works with, not against, the organization and is on porary duty to the company. As a CIO, my role has changed over the 16 years I've worked at the University of Miami. I've gone from the sage on a stage to a guide from the side. Do consultants understand that this change in operation has taken

Consultants, wake up. You must communicate integrate and operata as a partner. If you accuse and abuse, we all lose. We can't have a partnersh If you begin a relationship by attacking, threaten-ing or intimidating. And by all means, before any relationship begins, get the facts.

place for most CIOs?

naves is vice president of inform tion technology, CIO and deen of the

College of Engineering at the University of Mant

MI SEPTEMBER 16, 1996 COMPUTERWORLD

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Has It Changed Your Life Yet?



Power tools

Elegant tools for internal billing

By Jeffrey Gordon Angus

IS groups that charge back to internal departments are often encumbered by their record-keeping requirements. Time and project track-ing systems are usually a black hole of complex form-filling and cal-

But two general-purpose time-tracking and billing packages — TimeSheet Professional 4.0 for Windows by Timeslips Corp. and Time & Profit 1.2 by BytePro Corp. - can help information systems

These billing systems are inexpensive and connect to other programs, such as accounting and project management software. They are more logical and easier to use than most of the behemoth over-

head generators I've seen IS departments use for internal billing. And there's another use for these programs. In the past, I've been able to use these systems as a low-effort way for en workgroups to track project times by task. They can do this far more easily than if they used a full-blown work-breakdown structure (WBS) system. If you need full WBS accounting, a time-and-project tracker won't do. But for those sites that need the maximum amount of information for the least effort, this category is well worth looking at.

al 4.0 for Overall grade: B+ Price: 8199.95 de user, eslips Corp.

(214) 248-9232 TimeSheet Profe al is part of the suite of

The network version of I ng products from for Windows makes it easy to consolidate staffers Timestips. You can buy and use it separately from the suite, which is good because the full suite would be overkill for internal billing in most organizations.

Each person working on a project works from one of three data-entry areas. The first, a full-screen time sheet that has projects running down the side and days running across the top, is the most screen-consuming but the most logical. You can enter project hours every day and easily attach exses and notes. The second is a daily sheet, where you can use times to start and finish clocking a service for-each project. The third is a minisheet that occupies a small part of the screen when a user is working in other appli-

ing rates. Periodic billing is simple; workers can either use one of the dozens of available reports or customize them. TimeSheet Professional supports in porting and exporting of data to popular project-management packages, providing tracking of actual results vs. budget with minimal effort. You can also ort data to any of several payroli packages. With TimeSheet, users can customize the program's language. For exam-

ple, if you use the word "associate" or "contributor" instead of "staff" you can

have it appear throughout the program.

The network version makes the consolidation of staffers' time sheets simple, and the interaction is protected with trpical midrange security options

and profile capabilities. The interface is an improvement over previous versions. This version is al-most standard in terms of dealing with Windows standards. Documentation is only adequate, but the aniline help was well-designed.

only adequate, out the mane step was worker and less confusing the ny internal hill-back tool I've seen. It's good for consultants because of its

Overall grade: C Price: \$269 BytePro Corp.

(714) 622-0884

BytePro's Time Profit 1.2 was design to be a stand-alone system that integrates time-billing and more erneral accounting functions. It wraps all this under an interface

tion, you'll find Time & Profit's interface easy that looks much like a contact manager, one that uses the calendar and per-

sonal contact information screens to gather most of the data.

This is a more client-centric way to look at the time billing prob makes more sense for an individual practitioner or of fice than the old, time centric model. But most IS departments are less client-centered than the

kind of professional practice BytePro had in mind for its product.

This product doesn't have a networked version, so it works only where one person tracks time for the entire staff, or where you set up a dedicated comater on which each staff member enters his information. Many IS organisations can live with this limitation, but most work want to. And with other programs that support networked consolidation, the fact that this program was designed for stand-alone operation will be a barrier. This package receives a B+ for individuals, but it gets only a C for big IS shops.

But if a client-centered model works for your organiz & Profit's interface easy. Users can work from a task calendar, using the built-in timer to track time spent on each project. Like TimeSheet, users can sign multiple billing rates and add time to nonbillable activities.

The report-generation capabilities are good. They're clear, easy to use and cover most accounting and analytical output. Version 1.2 adds some positive features, including an intrinsic backupand-restore feature to make it easy to protect data. It also can print the notes attached to project billing lines on the

The interface doesn't have many surprises except for a few non-Windows elements. Instead of the usual go-away box in the upper left corner of a win-dow, some forms have a "close" button, and saving data usually requires Time sheets can cover several people, each with several projects and billmore explicit actions than experienced Windows program users expect.

Documentation is very good. The manual is detailed and exhaustive it cov-

Time & Profit 1.0 is a solid Windows program that's best applied to the rolestional practices for which it was designed.

Augus is a systems analyst at The Data Works Ltd. in Senttle.





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Paul L. Klein was named director of application development for ution systems at Rich Products Corp., a Soul products from in Ruffalo, N.Y. He was newfourth account manager at Electronic Data Systems Corp. in



ony Lackey was promoted to assistant vice president and director of the Computer Services Department at ABM Industries, Inc. in San Francisco, ABM provides physical plant and security services to sinesses throughout North America.

Jerome N. Gregoire was named vice president and chief information officer at Dell Computer Corp. in Austin, Texas. He most recently was vice president of IS at Presi-Cola Co. in Somers, N.Y.

Lionel Brown was named CIO at the Reseller Network Division of Intelligent Electronics. The Exton, Pa., firm provides information technology products and services to government and

Dev Gupta was appointed assignment manager at 1-800-NETWORK's Boston-area office. He will develop and maintain client relationships and man

are the placement of networking staff for the computer staffing firm, which is a business unit of

Christopher Carmon was named manager of computing and network operations at The Micro electronics and Computer Technology Corp., an industry-government research and development consortium in Austin, Texas. He has more than 20 years' experience as an IS masager.

Louis R. Hughes was named senior vice president and C10 at Empire Blue Cross/Blue Shield of New York. Hughes had been a marketing direc-



Tor D. Folkedal was named CIO at Sumits mo Bank of California based in San Francisco. He has more than 20 years of banking experience and served as executive vice president and CIO at First Nationwide Bank.

John J. Ogrinovich was named vice president and CIO at NGC Corp. The Houston-based firm selfs and transports energy products and services in North America and the U.K.

The American National Standards Inst (ANSI) has named Bob Feghali CIO. ANSI, in New York, is a private, ponprofit organ brings together the public and private sectors to develop voluntary standards for several U.S. in-

es R. Kinney, vice president and CIO of Kraft Foods, was inducted as president of the Society for Information Management (SIM) on July 1. He has been on SIM's executive board



since 1990.

Felix Disz was named chief technology of fcer at Interphase Corp. in Dallas. He was director of systems architecture and previously worked at ITT Telecom, Siemens Corp. and ITT Standard Electric.



been elected executive vice president at Alle-gheny Ludium Corp. in Pittsburgh. He will oversee IT, engineering, manufac-turing, technical and eduction control. He had been senior technical vice president at the manufacturer of steel specialty

The National Association of State Information Re-source Executives recently appounced the follow-

 Edward B. Altman was named interim CIO for the state of New Mexico. Richard Olsen became director of Virginia's Information Resource Management Division as of July 1. He replaced Mike Durkin, who re-

 Don Hallberg was named acting chief of the Office of Information Services for California's Department of General Services. He replaces P. K. Agarwal, who became CIO for the state Franchise Tax Board's IT division.



was named vice president of IS at The Times Mirror Co., the Los Angeles-be

news and inform company that publish es the Los Angeles Times, News and other daily news papers. She became

director of IS last year

Max D. Hopper and Regio McKenna have joined the board of directors at BBN Corp. in Cambridge, Mass. Hopper recently retired as se nior vice president of AMR Corp. and chairman of its Sabre Group, which provides IS for thousands of travel professionals

Patricia Anderson, executive vice president of the IS arm of defense contractor Lockheed Martin, was named to the board of directors at the Broad Alliance for Multimedia Technology and Applications, the global alliance for networked

Transplants ahead U.S. hospitals plan to undergo some

major IT surgery over the next three years, a study says.

H ospitals plan to spend about \$14.5 billion on services and software for critical applications, replacing between 60% and 90% of these applications, according to Input, a San Francisco-based researcher of information systems markets, software and the internet. That amount will exceed planned es on hardware, input says. The study,

conducted in March and April and released in August, surveyed 117 hospitals and hospital groups. "It doesn't come as a surprise," says Galer Briggs, vice president and chief information officer at St. Jude Children's Hospital in Memphis. Briggs says most CEOs at the nation's hospitals conside information technology a competitive tool. The massive investment presages potential glory and stress for IS personnel.

On the positive side, says Gwendolyn B. Moore, a partner at Andersen Consulting who specializes in the health care industry, IS managers and staffers can boost their departments' capabilities, and help bospitals become more competitive. IS will have to build new capabilities to support areas such as disThe downside, or threat, is learning new technologies such as object-oriented programing to get to that stage, Moore says.

The highest replacement rates (about 90%) will be for patient-related applications (such as accounting and care) and medical records systems, nput says.

Input says managed care and its impact on the overall health care environment is the chief catalyst for the turnover. Hospitals also cited the need for petter Information and Improved communic

But the report cautions that if the new applica tions merely Improve those from the preman

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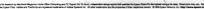
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12	26	2	Bayer's Guide to Internet Security: Corporations may be flooting to the Internet, but they are doing it with a wary aye. Feer of hackers and other security concerns have legst the corporate world from taking fall advertage of the Internet's capabilities. This Buyer's Guide will look at frewell products and other technologies designed to support robust but secure Internet applications.	.1
19	2	9	Closer Leok: Object Databases IS Leadership Series Supplement	Object World Starch San Jose Study 8/20 - 8/22
26	9	16	Bargin's Golde to PC LIAN Management Products: Not dry to keep the disprinant ingines sensing which deficiently as Self marrative to lead to be about part come management? A residy of products help 80 droot from responsibilities, and they work in cooperation with enterprised a system amangement produces. The Bargin's close will be not in energy to continue on the enterprised systems introgramment produces. The Bargin's close will be not energy to continue see of some of from LIAN load management Marchite (Respirations): between the continue of the	CA World New Orleans 8/25 - 8/30
S≠4. 2	16	23	Special Report: Salary Survey Computerword's annual salary survey captures salary levels for IS professionals from the CIO to help deak operator. A major undertaking, the survey results are broken down by company size, region and industry.	
9	23	30	Clear Lack-Honors 25 A jaid Companion (Manch 25 A jaid Companion (Manch 25) A jaid Companion (Manch	Networks Expe Starch Dalles, 9/10 - 9/12 Study Mobile World Boston, 9/10 - 9/12 Internet Commerce Expe Anahaim, 9/10 - 9/12
	30	6	Bayer's Galds to Internetworking: With demand for bendwidth still on the rise, users are turning to sechnologies such as less Ethernet and token ring switches. This Buyer's Guide will look at how users are addressing the bandwidth challenge and which products best most their needs. 15 Leadarship Series Supplement.	Notworld + Interop Atlanta 9/18 - 9/20
23	Sapt.	13	Managing: The best new books for IS managers Special Report: Toy Web sites for IS managers Monthly Supplement: Intransects	
30	13	Sept. 20	Buyer's Galde to Groupwater: The cit' groupwate model went out the window with the emergence of the World Wide Web. New, products such as Loss Motes. Microsoft Entenge and Novell Groupwise XTD are being repositioned to set a greatweys to the instem. The Buyer's Galde will look at how those environmental products are handling the transition, and at some of the Web-based alternatives being offered by startups.	San Francisco 9/29 - 10/2
7	20	27	Buyer's Guide to RISC Servers: Enterpresente applications claim am being driven by multiprocessor servers based on Reduced Instruction Set Computer technologies such as PowerPC, Alpha, Spors, MIPS and PARISC. This Buyer's Guide will explore the challenge of running the corporation on these products, and the strengths and weaknessed or gone of the lay vendors.	Unix Expo New York 10/8 - 10/10
14	27	4	Closer Leek: Videoconferencing Is it really ready for the destop? A look at the state of the art in the PC space.	
- 1	4	11	Buyer's Guide to Netabook P-CL. They are the core computing pletforms for a growing percentage of principal designs of the principal designs of the principal designs of the principal designs gettern by care the core purch of designs gettern by care principal designs gettern b	
	11	10	Closer Leek: Jine Development Mentifyl Supplament: Intraneta Annual Completerworld Campus Edition (actual mail date October 31)	Software Developers' Conf. Washington, DC 10/29 - 10/31

Computerworld Editorial Calendar

Nov. - Dec., 1996

=	M 0	-		
4	18	25	Buyer's Guide to Network Operating Systems: Complex, enterprisewide applications need a robust network operating system to be working in the background. This Buyer's Guide will explore the NOS buying process, and assmite how real NOS products such as Windows NT, Network, Banyan Vines, and OS/2 Warp Server apport the corporate user.	
18	84. 25	1	Annual Computerworld Stiffs Survey: Where is the talent going? What stiffs do you need to accound in an IS careor? The expended teature distalls which IS stiffs are most in demand — by region, industry and technology—and which one are bringing IS professionals the greatest rewards.	-
18	1 .	.8	Reyer's Guide to Mellemaide PCI. The day of the simple DCG-still-Repoyanch hard-drine PCI has boy parent. Tody or opportunes demand from one of the parent Tody or opportunes demand from one of the parent policy or opportunes of the parent policy or opportunes of the parent light integrated all hidde and assent schrockey, bely expect OD PCIMs, reportunes and hugo-opportunes ded unture. The Buyer's dashed will exertine the following relative to the parent policy of the	Comdex Full Las Vegas 11/16 - 11/22
25	Nov. 8	15	Closer Look: Outcourcing/systems integration Monthly Supplement: Intranets	Starch Study
2	15	22 22	Soyer's Guide in Decision Support Teols: CECs and other associates and demanding new levels of terminal programs to present leads. They used report in the left help below made strategic decisions. That the leads of the second strategic decisions. That the decision support tooks and a set hard Wide Mel Mich. They have disks will assist so most of the lary decision support took, and explore how user organizations are leveraging new technologies to support second-re-depiction making.	D8 Expo New York 12/2 - 12/6
9	™ 22	27	Closer Look: Software license management IS Leadership Series Supplement	Databast/Client Server World Chicago 12/10 - 12/12
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12	31	White Paper: Supply Chain Management (part 3 of 4-pert Manufacturing Directions Series)		
19	21	White Paper: RAID	Object World Starch Study	
2	21	White Paper: Pleanciel & Human Resource Applications (part 3 of 4-part Enterprise Software Directions Series)	127	
2 2	Sept. 27	White Paper: Metwork & Systems Management: Adopt for Change or Get Out of the Way (part 4 of 4-part Manufacturing Directions Series)	DE Expo	
9 9	20	White Paper: Systems & Network Management (part 4 of 4-part Enterprise Software Directions Sedies)	Detabase/Client Server Woo	

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Buyer's Guide



do you trust your vendor?

BY KEVIN BURDEN

eters and engineers in the networking inry, the process of buying switches, routers her internetworking gear comes down to idence that your chosen vendor will provide products and services that do the job. We're through being roasted by we we're not familiar with," says Rick Beasley, a senior telecom nications engineer at NationsBank-CRT, Inc. in Chicago. We get promised the world, then end up listening to excuses and still more promises that what we want will be available in the next quarter.

Now, only products that fill important niche applicatio will steer Beasley away from the relationship he's built with 3Com Corp. He says having a vendor he can depend on is mo valuable than any advantage to be gained from best-of-breed

Because there are so many managers who. like Beari make buying decisions based on vendors' overall performance, Computerworld set out to examine the relationships betw users and internetworking vendors. After all, changes in product lines are more common than changes affecting the five ven-

does that have been responsible for supplying most of the available products. In a survey of 150 managers in large companies — 30 users of each of the than the other vendors in our study. All vendors have strengths to cap thre leading internetworking vendors — customers recalled their experiences with everything from product quality and technical support to ven-

Overall satisfaction		s speak th a grade o	f A meani	ng very	y goo	d
	А	В	С		D	
Mon.	17	Sec.			0	
Cabletron	13	12	5		0	•
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Cisco	10	11	9		0	
	9	11	1.0			10

"Base: 30 years per worder, Numbers recreased the number of years who applied the grade.

Overall, 3Com and Cabletron Systems, Inc. satisfy their customers bette

TECHNOLOGY OVERVIEW

BY LYMBA RADIOSEVICH

Two separate network components drive need for more bandwidth: the backbone, which is the portion of the network conner

ed by routers and switches ino workstations or servers), and the connection between the servers and that backbone

those bottlenecks have four main technologies to consider. Fast Ethernet (switcher orshared), Ayrichtonous Transfer Mode (ATM), switched Token Ring and switched Fiber Distributed Data interface (FDDR). Of those, Fast Ethernet and ATM have the m

momentum.
Alto, network managers should watch out for a fifth technology, Glaphi Ethernet, a first technology, Glaphi Ethernet, a 1 Million Biff, less Leichnology under development by the Ethernet standards committee. Glaphi Ethernet won't solve most user grob-lens for a while—a completed standard in the committee of the solvent of th

committed to it.

Some observers say Gigabit Ethernet will
become a cheaper, more familiar alternative
to ATM on the network backborie. If so, ease
of upgrade could influence your thinking
about an ATM vs. Feet fithernet curchase.

But before you send any purchase orders read the following snapshots on high-speed LAN technologies. They're based on the espert advice of networking consultants Skip MacApkill at Gartner Goops, Inc. in Stamford, Comn., and John Morency at The Registor Inc. in Insulator, Marie

FAST ETHERNET

Definition: The high-special networking is tacknoologic of choice for many. Fast Element runs at 1,00M bill, sec. That's up tenfold from traditional Element, which name at 1,00M bill, sec. Both 1,00M and 1,00M bill, sec. Element element, when name at 1,00M bill, sec. Element element, when networks of the control of the second of the control of the second of the se

What is expect. Another conds that What is expect. Another conds that support of the and 200M full year, consequences will become more prevaient in user evidentiments as a Peripheral Component to tecconocc (PCI) is adopted over Estended years (Standard Architectum buses for desisting PCIs, PCI is a local bus that provides a higher speed data path between the CPU and peripherals such as network adapters. Also, more PC and workstation versions.

will build 10M/10OM bit/sec. adapters directly in to PCs and workstationa. In terms of switches, the price per port will drop to roughly \$100 during the next year or so, making 100M bit/sec. Ethernet network

3Com does things right

CONTINUED FROM PAGE 99

3Com Corp. Santa Clare, Calif. (800) 638-3266 www.3com.com

3Com is doing some things very right. More than half its surveyed users graded their overall satisfaction with the highest mark available, a noticeable gap between it and the next-best wendor. Calibrition.

Overall satisfaction — a question that was asked directly rather than being a tally of other grades — is influenced by several factors. But one surely making a significant impression in the attention 3Com has paid to its products "ease of sevay," which 90% of its users gove frourable grades of good or very good. That again was the highest of the

survey.
"Xcom doesn't make the setup as challenging as other vendors do," says Eric Hindia, program analyst at The Yankee Geoop, a research firm in Boston. Their products tend to be stackable, fixed-configuration, plug-and-play devices as opposed to Cabletren's and Cisco's, which are A B

Maintainability 17 6

Reliability (24 com) 13 8

Integration with existing products 12 11

Ease of setup 9 18

Service and support (24 com) 5 7

often highly configurable, mo

Users also schred 3Com's products well for "ministrainbillij" and "rase of integration," but those scores were also high for the other wendors. For 2Com, though, where and integrity are high points that are less common among competitors. Of the five wendors in the survey, 3Com scored the highest for in 'value for the dollar' and lot fol-

lowing through on promines (notther's chartod, "Scom is known as so on of the lowest cost providers, acid ing many of their products through le [value-added resetters], which conprete on price a lot," Heldin suys. — As Karl Schill, actwork engineer at at Promss Hessel Corp. in Memphia, puls it, "They're not hype mongers. — They're been litting their release dates, and their products always perdates, and their products always per-

form as advertised."

Cabletron pleases Fortune 500

support from Cabletron

"Their support isn't just good, it's

enistently good," says Frank En-

gland, a data communications spe-

Cabletron Systems, Inc Rochester, N.H. (800) 332-9401

Fower users awarded Cabletron an A for overall satisfaction than 3 Com, but nearly three lines as many gave Cabletron a B. And because Cabletron's primary customers are typically harder-to-please Fortune 500 compaties; those grades are more positive for Cabletron than they insish rones.

Chileron dore a let of handholding to keep in customers satisfied, says Randy Blackman, LAN administrator at Hastero Corp. in Di-Paus, Texas. It also selfs his products directly rather than through thirdparty channels, which does a lot for its quality of service. Hadds says. Caldetrum Thas more control over what it does for customers than companies working through residers."

Justin Fisher, network specialist at Blue Cross & Blue Shield of Connecticut in New Haven, says engineers periodically call to check

	Α	В
Integration with existing products	14	7
Maintainability	12	7
Service and support (24 users)	8	5
Ease of setup	7	18
Reliability (24 users)	7	11

Been. 20 where pur version blankers represent the number of states and app grade, but all upon wore able to present questions or salability and impose.) The categories lated are those in which the worker sound its highest grades.

to problem. They've even steeped cinder for Mobile County, Als. They say in constant trooch with town — always a saleman with an uncaptance. And you don't have to be from a kin, IS coordinator at Trident Technical Collegie in Charleston, S.C.

nical College in Charleston, S.C.
"Their quality control is very good.
So is their support," says William
Jones, lead technician at Maricopa
Community College in Tempe, Ariz.

Bay targets large, soph companies much as Cabietron does

but without the same success in service and support. Bay's service, which scored the

lowest among the vendors, trickled down to affect other key categories such as "ease of setup." Although 21 users gave setup favorable ratings, Bay's score was the second-worst of

"Setup is difficult because the doctation is not that good. You're lucky if you even get a manual even luckier if it's up to date," says Anthony Pecora, data communi-cations specialist at Whitehall-Robina Healthcare, Inc. in Rich-

mond, Va. And it's not just the documen tation. "Getting any real technical information out of them is very difficult," says Chris Davis, network engineer at Kalmbach Publishing Co. in Waukesha, Wis. 'The docntation isn't much more techni-

- Promoner		В
Reliability (23 users)	12	9
Maintainability	10	11
Integration with existing products	9	12
Ease of setup	7	14
Service and support (23 ment)	4	8

cal than how to plug in the power cord, and it's impossible to get anyone to walk through your prob-

lems," he says. Bay users also aren't as com as other users that their vendor would keep up with switching techgy. "They've been slow out of blocks with newer technologies," Davis says. "Their Fast

ice, several users say they haven't had to make a support call.

"The products are very reliable.
We haven't had a reason to use their service," says Floyd Jochim-Ethernet switch, for instance,

catability for later. At roughly \$200 to \$300 or card, the 10M/100M bit/sec. cards it the same or only slightly more than 10M

ood buffer management. Traffic that ges from 10M to 100M bit/sec. must

e to use It: It's en alt ing shops that don't want to move to

ASYNCHRONOUS TRANSFER II

Cisco: Solid but not top-rate

Cisco deals a full line of internetworking products but is best known for its router business, It leads the router market in nearly every possible measurement. That, Hindin says, "leads to a perception that Cisco is tops in the industry." But Cisco's customer satisfaction isn't as suc-

cressful as its market presence. Overall satisfaction scores are solid but not in the same league as Cabletton and 3Com. And users were more likely to award a R then an A in many categories. That sog equipment but not overly thrilled.

Hindin attributes those attitudes to the nature of the beasts. "Routers are probably the most sophistiequipment. They're complicated to install and difficult to troubleshoot, which doesn't excite users too much," he says. Even so, approval from 75% of its

users for "ease of setup" and "inte-



gration capabilities" is respectable and shows that users are ultimately happy with their vendor choice. "You get a good value for your money with Cisco. They can be expensive, but their quality, service and leadership are worth it," says Adam Young, syser at Russell Corp. in

sander City, Ala. Other users seconded Young's po sition on paying more for quality.

You pay for this kind of reliability But we don't ever have problems, so price is not an issue," says Charles Hunter, IS director at the U.S. De-

"Im very satisfied with the reshility; they're worth every pen ays Fredrick Crispin, telecomm

TECHNOLOGY OVERVIEW

(Continued from Asses 1011)

(-----

what to expect it a dustance monthly as the leading backbone technology. The AFM market is maturing, which means installed standards, proven capabilities in the user base and falling prices. But ATM is still expensive compared with Fast Elbernet (Iconsts 3650 to \$750 per 25M but /sec. ATM connection and \$800 to \$900 for 155M bit /sec. ATM. And standards won is

still under way on routing and LAN emutation.

Where to use It: In the main backbone
with earver connections. It's good for composies with variable staffic needs during the
day that need quality of service and band-

Advised: The emerging private network-to network interface standard, which will enable different wendors." ATM equipment to in teroperate, may require users to swap out. ATM cards, modules or the whole switch. Therefore, purchasens should check on the wendor a userate schedules and necrotists.

for the upgrade before buying, More information: The ATM Forum, (415) 949-6700 (new.atmforum.com). ATM Network Planners Association,

FINER DISTRIBUTED DATA

Definition: A method by which switches set up virtual, point-to-point connections between nodes on a 100M bit/sec. FDDI net-

What to expect: FDDI is being eclipsed by Fast Dimerret and ATM, but it a still a viabite technology and has a long shell life. Switching lats companies extend the existing FDDI environment using dedicated links. Pricing is still high—about \$3,000 per FDDI port — and there are few vendors that offer

port — and there are five vendors that offer FDDI switching. Most sendors treat it as a faction lises to service existing FDDI shops. Where to use It: It a faction approach to help people who he invested in FDDI protect that investment, usually by relieving context that investment, usually by relieving con-

act that investment, usually by milloring conposition on a network backbone or server ring.

Parchassing advices: The good news is out don't have a ton of choices so the deciion process is greatly straightforward. The east news is you don't have a ton of choices. Yerdoo's will continue to support PDD into the presceeble future, but nothing new is es-

pected. The product category is mature, and if you're buying FDOI, you probably already neve it and you'd probably stick to the product line of fered by your current vendor.

More beforeasther: FDOI Consortium

ability Laboratory (www.iol.unh.edu/ consoctiums/fddi).

NAMES OF THE OWNER OF THE PERSON NAMES.

IBM scores with partnering

Armonic, N.Y. (800) 426-3333

IBM's interactworking business its strongest line. Most of its scores in the survey, including overall satisfaction, were below those of the other vendors, a situation that word facil any bragging rights. And if not for its many partnerships with other vendors, IBM wouldn's even lawe a visible presence in intereven lawe a visible presence in inter-

The woulde with IBM is that it's been late to many of the internet, which may be internet, Hissian says. Because it missed the router revolution, be says, IBM needed to partner with Proteon, Inc. It also missed the lab business, he adds, forcing it to use Chipcom Corp, as an OEM An one it's partnered with Xylan Cop, and Cascade Communications Corp.

The positives to IBM's receiling strategy are best-of-breed partnerships. Users stand a decent chance of getting cutting-edge equipment, which is why 'technology leaderto-

for switches, he says.

On the cutting edge through partnership

	A	В
Technology leadership	8	12
Reliability (22 users)	6	13
Value	8	13
Service and support (22 users)	5	9
		4.0

Same 20 years per reside. However, represent the number of cases who impried the grade. The of cases upon data to present purposes on relatifying and proving report

ship" is IBM's highest score.
"The products we've bought from
[IBM] have always been thought of
as the sunguards of the industry,"
says Marc Alan Reichbort, CEO of
Basset Haund Co. in Bownton

Beach, Fla.

But integration and configuration suffer from the partnering practice.

IBM was the only verdor without integration among its too free

re. scores, and "ease of configuration" received the lowest approval rating of all all the vendors. "It all works, but "g," I don't want to go through that integration nightmare again," says on Beston Cash, sealor manager at Arcostook Medical Center in on Presupe site, Maine. "

t Burden is Computerworld's senior re

UP TO THE MINUTE

With Networld/Interop kicking off this week, vendors have been busy with announcements in the internetworking arena. Recent developments include the following:

▶ in a battle to offer contedictive writching, Cabletron laid out plans to angest Gicco with a low-end switch called MMAC-Plan Access, Meanwhile, Ciaco in preparing a high-end which, Catalyst 500, to compete with Cabletran, Citico atto announced a switching archeme — Tag Switching — to rival Ipsiloo Network inch. Internet Phaston Switching.

by the middle of next year.

Bay Networks officials say that over the next three mosths the company will plane in delivery of long-awated LAN switching modules for its System 5000 habs. Bay also amounced a otherware upgrade that will add routing functionality to its Centilities 100 and System 5000 switchen. The upgrade will be available.

Bay also announced plans to acquire cable modes maker LANcity Corp. with the intention of providing high-speed data transmissions to homes and offices via cable toleration networks.

Ericsson, Inc. and NEC Corp. annuanced they would work with Ipsilon's IP Switching technology to build their next generation of switches.



➤ Researchers at Belicore warned that internet traffic could swamp telephone networks, causing loss or interruption of telephone services unless the networks are networked.

Cabletron demonstrated interactive Web-based network management through its Spectrum Enterprise Manager 40 nother, using Jawa, Commoo Object Request Broker Architecture 2.0 objects and Microsoft Cosp.'s ActiveX framework to monitor and manage networks from bruveser—

➤ 3Cóm announced it has developed but not shipped its first wireless device, a 10M bit/sec. wireless Ethernet card. 3Com also announced a reorganization in which separate groups were formed to focus on high- and low-end customers.

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If you're in the market for a small business server, you'll want to check out AS/400° Advanced Series. It's a lot less expensive than similarly configured competitive systems. In fact, prices start as low as \$7.995.

If that's a surprise, consider this. With AS/400, the operating system, relational database, security, systems management and communications are fully integrated into the system. That means there's no need to go out and find the latest and greatest software — it's all built in. No assembly, no compatibility testing, no programming. You can get right down to business. And here's another surprise. According to an independent consultant's taxify of American small businesses, AS/400

has the lowest cost-of-use over a five-year period.
The study compares leading INTEL-based LAN serverplatforms to the 64-bit AS/400 and examines system, staffing and networking expenditures.

So if it's time to move up to a server, put AS/400 Advanced Series on your shopping list. Costs less to buy. Costs even less to own. If you'd like to know more, visit us at www.as/400.ibm.com or call 1800 IBM-4YOU, Priority Code CAS/6B002 for a detailed information package including a copy of the IDC report.

Solutions for a small planet"



By David Rosenthal

I walk in the office and all eyes lock on me. No surprise; some of the fulltimers always fear I'm there to ace them out. They oughta relax, I don't want their jobs. Been there. Done that, I like being a contractor, I'm free, I'm my own boss. A fresh challenge every day. Drawbacks? Sure. Vague assignments. Political cross fire. Flusive PCs. But that's all part of my job because ...

am a temp.

I'm a contract IS professional.

I'm usually assigned to fairly large companies. I started by work-ing for a consulting firm, then switched to contracting through an

Before doing this, I was a salaried employee for 12 years at one outputs. Why the change? Professional growth and money were the agreed reason. Temporary work gave me the chance to see different ork cavironments, software tools and corporate cultures.

both), you're always the new face in the department. You' job is to make the customer happy, but you know little about the people you have to please. Unlike permanent workers, who have several mouths before a serious evaluation, you're expected to perform right away. If you work for a good consulting firm or flexible staffing agency,

secially one that has worked with the customer in the pa said be able to tell you what to expect. That is a big asset. I am & temp, page 106

Mann) SEPTEMBER 16, 1996 COMPUT

I am a temp

CONTINUED FROM PAGE 105

I've set up some guidelines for contractors and those who use them. Pirst, rules for contractors:



Set realistic expectations

Do this even before accepting the assignment. For example, programs that use Lotus Development Corp. is Notes application programs interface (APT). I have experience with C, and I've been a Notes developer in several years. But I had never before used the APT, for had I wireled on the customer and the APT.

tomer's required operating system and compiler.

The staffing agency and I made sure the customer linew all that before I got the job. Knowing my limitations up front, the customer wann's surprised to see me heads down in manuals for the first couple of weeks. Had I claimed to be an API experts on order to get the job. I doubt If stall be there today.



Know who your boss is

If you're working through an agency, make sure the manager from your firm known that at well. The only had review I bed in 13 years of proliminated work came when my consuling firm's manager contacted a customer's employees rather than my looss for input. In that assignment, I filled a management spot while a permanent replacement was sought. The job required balancing the goals of several departments with limited resources location services have were all consulting.

The job required abasicing the gasis of several departments with number resources keeping severyone keppy seam Douelshe.

The two directors I had worked with were relatively pleased with my performance, but some of the managers were not Goess who had time to provide inputs for my review? The quality assurance manager said I spent too much time installing and evaluating the Notes Web Publisher, a task surgined to me by the director of information systems. I had no choice about what to work on: The IS director much normal sub-lived me and diseased write out.



Avoid office politics

That isn't always possible, but do try. The tricky thing is that most projects have some political angle, but as a oewbie, you won't know about them. Let others handle politics.

Stay focused

As a technical professional, you'll often be asked to bely with upried problems—by the administrates whose PC suppried, by the developer's in the case the working on a different respect or by the manager of another department. On one hand, those respects they see as opportunity for more work. On the other hand, it's easy to get too busy beloing to get your original work done.

Contractors who doo't accomplish their primary task are soon unemployed. Discuss this issue with your contourer manager at the start of your assignment. Does he want you to take oo additional work? Does he want such requests to go through him?



You may or may not be asked to keep a log of your files. It you aren't, do no anyway. Should a question concerning your progress or billing come up, the documentation will be invaluable. I admit, I don't always keep up this practice no long-term assignments (assuming the cancer didn't ask for if), but I do so until I feel constitute with the inhance.

tomer didn't sak for ik), but I do so until I feet comfortable with the situation.

Every week, read your log and think about how your activities relate to your assignment. Are you doing what was described? If not, what chasped and why?

Most important, do your client managers know about any changes? If not, inform them immediately.

Grit your teeth, and be a pro

rectly, you have an obligation to try to get it fixed. But remember that it's not your project. The outsomer's abusys right, especially when you're a temp. No master how correct you are technically, if you can't consticuthe customer of that without getting him steamed, you're out going to succeed.

I have often been asked to implement transaction processing systems using

Notes, Notes in 1 a good fit for that type of system. I can usually convince the circuit to use a better tool. The one fitted glidath — I wand to on the team to start of the project — the client ended up not using the system after investing 15 months of constructions and a start of the project. We know there would be performance problems, but the customer wanted Notes so the customer good to the customer

So what about the other side? If you manage temporary professionals, what can you do to help them get the job done right? Here are a few observations.

(F)

Set expectations

Let your contractor loow what to expect about of time. An one assignment, he had in facility the by select for information, on some assignments, he had no real notion of what would be subted of me before! selected up for work. On others, the had eather specifications to review before! arrived on site. I don't maint investing a liew hours of reading to get a best start: he before me and the selected properties of the selected properties. And it below me do productive work.



Provide logistical and policy information

On my very first assignment, I was asked to show up for work at 7 a.m., only to find that the company parking lot didn't open until 7.30. Talk about a roadblock to success!

Later, at the same client, I noticed that neveral of the regular employees had cellular telephones. Since I didn't have an office phone at the site, I started to bring in my own cellular. I was therefore quite surprised when socurity stopped me in the hall as I was taking a call. It turned out temporaries weren't allowed

me a the hall so I was taking a call. It harmed out temperaries weren't allowed colladar phones and tan company. In call firty gio fagine affa prole; out. If your company employs temperary workers frequently, see if your human resources department has a handout with this type of policy information. If no, you one tegrider yournell. Be particularly careful to note where policies for temporary workers and original employees differ. The new workers need to know those facts, and it's to your advantage not to make them investigate— after all, you've naming a the how.



Set up work space and other resources in advance

Only twice have I had the pleasure of walking in to a new assignment and finding a computer to use on my first day. Other times, I've waited as long as two weeks to get equipment. I don't mind waiting, but the sooner I can get to work, the sooner I can get the job done.

Leaf time and the result in a contract Til arear length to later. It was that it would be tracked from the tracked to put more disk upon for the Moiss arear we were using for tending. That wouldn't have been so supprising fifthe client batch been one of the largues PC mandatures in the world. The department want allowed to low from a synace clie, but internal orders had the lowest priority of any channel. I could have driven forw to CompUSA and bought the drive bareded that day, but that was against the rains. I fell like I was inside: a "Dilbert" carbon, (Of course, I didn't have my defining with the client there's on more to be gained



Tell your staff what the contractor's there for

Let the rest of your staff know what the contractor is there to do. If you don't want the contractor distracted by work outside their assignment, tell your team not to ask for help.

After 12 years as a permanent employee at a Fortune 100 company, headd Remembal Howed into the temporary professional life as the professional life as a second control of the Republisher, a division of Office Specialists, Dat. in Peabody, Heav. For the past four years, he has epscialist of information development, He is currently on emsignment working with the Boxes 41. Ref.

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itance

Three families, representing two generations of IS professionals, reflect on

the industry's past, present and future

by Dana Crenshaw



ne mid-1950s, Cesar Sala graduated from college and began working for a banking and insurance conglomerate in his native Havana. A four-year degree netted him a job at \$4,200

The company he worked for had the third-largest data processing installation in the country. After spending a year in the accounting department, he was transferred to the mechanical accounting department - distinguished by its use of computers. In 1961, Sala emigrated to the U.S.

The first computer Sala operated was a RAMAC-305. The typical configuration for the RAMAC consisted of a console with an electric typewriter-like keyboard. Data was input first through high-speed card readers and then tape drivés. The processing unit consisted of four cabinets full of electronic tubes (Type 2050), which almost always "crashed" the system because of their habit of burning constantly.

In 1989, Sala's son, also named Cesar, began his career in the information systems industry. After earning a bachelor's degree, he took a job at \$18,000 per year. That figure was almost four and a half times the salary his father earned 34 years earlier.

The relationship between this father and son has been enhanced by a mutual interest in computers. The senior Sala writes. "I feel I have accomplished most of the goals I set for myself. I have the added satisfaction of seeing my son choose the same field and create a role-reversal situation where I am now the one asking the questions, with him answering,"

Their relationship also sheds light on the past, present and future of the computer industry. Along with two other families of IS professionals, they recently reflected on their cureers and how the two all photofinishing plant and oversees all plant op-generations compare. Their thoughts reveal some in-erations, including IS. Salary: upper-\$40a.

Painting the past

He, Ga., he is ed in Cobol er and Pas-



By trained to program for an IBM 7080, using the 7080 Autocoder language. We didn't have disk drives on these machines, only a card reader and tape drives. I worked in Cobol, and later a, on 360-class machines until 1979. I got into IS in 1968 at the Social Security Administration, which had started a training program to develop new Cobol programmers. Programming has forever been as inter-

estion as I expected "Later, I was a part of a team which developed and provided support for a PC software program written inhouse using Clipper. Recently, I started in a new proing position maintaining Cobol programs. "It's easier for my son to be successful in today's IS environment. When I got my break, there were no advertisements for jobs, and there were very few places to get training. These days, job listings and training op-

Also from Snellville, Chris Jones has an ase'a degree in data; eer in 1985 trains ng. He began his ed in Cobol. A progr og, his IS skill is still Cobol.

portunities are in abundance.

ben I started working 11 years ago, entry-level proning and support jobs were easy to come by. even without a four-year degree. The skills that were most in demand were for the IBM mainframe, using Cobol, JCL, VSAM and

CICS. I didn't see as many contractors then "The industry has undergone a great transforma-tion since my father began. In his days, IS wasn't inteed into the core business, and information was not viewed as a 'strategic asset.' Also, programmers were more knowledgeable about the hardware."

Canvassing today



t in easier for today's generation to su ceed: Singe the advent of the PC, the computer has become a house word; and computing is taught from kipdergarten to college.

*Every ee has the opportunity to take or through adult education or a community college. The industry no longer has to sell the idea of the need for computers, thus making easier the implementation of systems by analysts, programmers, etc.

"I feel I have come full circle in my career. I started working with computers in the mechanical accoun department. Through downsizing, the company reduced the staff to two operators and two dataentry persons. I was offered the position that I have because of my experience with the company and a knowledge of the operations of the plant. Over the years, our equipment and processes have advanced with technology. Everything has become controlled by computers."



skilled in Windows 3.1, Xb vell and PCs. Salary: mid-840s.

n days past, it seemed that only large companies could afford computers. Today, the computer has become accessible to all. Not only are computers in the offices, they're in the homes as well. Training and software have also become more widely

With the increased acceptance and availability of the computer, the competition in the IS industry has increased. Because of that, it is a little harder to succeed today than in my father's day. More and more people have access to the same opportunities, so the selection pool is much bigger for potential employers Thus, it's important to stay informed on IS issues and to stay on top of the rapid changes in technology

"To keep my level of knowledge up to par with today's technology, I read trade magazines, particip in technical forums or group discussions, attend training classes and the PowerBuilder users group meetings. I also visit programming forums, such as Clipper and PowerBuilder on CompuServe and America Online, and surf the Internet.

Framing the future

The mother of Dana Crenshaw, Patricia Carroll from Hamden, Conn., began her IS career in 1968 with an associate's degree in applied science. Originally trained in Autocoder, BAL, For tran and RPG (in-house training), she is an IS ager in the communications industry, re-

was hired as an entry-level prog and was promoted three years later to amer. My peers included former ons clients who had been reined, housewives reentering the workforce, technical institute graduates and a couple of very bright high school graduates. My job encompassed programming for IBM 1471 and 7070 mac - 4K and 8K memories - in Autocoder, BAL, RPG and Fortran.

"I expected to last about three to five years in the industry. until the mental stress would become so operous that I would have to quit to look for a sar Tweaty-eight



years later, I'm ounded I have lasted — and experienced so many radical changes that seem to have come out of a science-Sction movie. I find today's IS industry to be scredible, invigorating and challenging - with limit-

"In the next century, I expect we will see unb rations of computer technology, especially in the field of medicine. I project that personal computing will completely replace mainframe computing. Oppor tunifies will abound for the entrepreseur who can take charge and doesn't fear failure. To be successful, you'll need to be a person of integrity, be an intelligent risk-taker and someone who doesn't take no for answer up-

Crenshaw entered the IS workforce in 1986, with a bachelor of sc was trained in Fortran and Banic. A systems a but consultant and team leader from Austell, he is skilled in Clipper, PowerBuilder 4.0, Vir Objects, Novell and SQL. Salary: mid-840s.

til you're convinced no is the right answer.

ring my 12-year career, I have observed many significant changes in the industry, but ne more dramatic than the loss of commitment by compa-

"I find that I now have to take full responsibility for shing and reaching my career goals. I have to take classes on my own time and with my own me if necessary, and I have to make sure I am skilled in the latest technology, such as the intertiet, Hypertext Markup Language, graphical user interface, PowerBuilder, Oracle, etc. The bottom line is that I can't sit back waiting for opportunity to knock. I prepare myself and seek out coportunity

"What I see for the future is a change in the industry where about 60% of the workforce in large come will be contractors. The contractors will be telecommuters who still their working time between home and the office. The skills that will be in demand the most will revolve around a combination of client/ server technology and the Internet. I expect the pay for those with skills in this area to continue to grow where six farure salaries become common."



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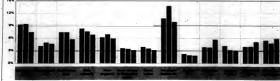
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Marketplace

Web pressures prompt outsourcing

By Alan R. Earls

By Alast

While the Internet his actived end
users, it has brought complexity
to information systems. As a result, many organizations are deciding to
outsource World Wide Web implementation from the periop. Others make the decision when it becomes clear that the Web in
the straw that may break the IS camerla.

When the straw that may break the IS camerla.

sion when it becomes clear that the Web is the straw that may break the ScameTa back in terms of time and expense.

"Cutting cost is the driver more than anything else. It is hard for companies with limited resources — especially the smaller ones — to keep up with the demands of managing a network while the technology is changing almost daily." says Tom Jenkins, a broadband consultant at Tele-Choice, lose in Weroan, N.J.

Tough decisions

vances spooks management

Jenkins says most companies don't just decide to outsource "out of the blue." It is a complex decision, increasingly influenced by the growing number and increased sophistication of laternet service, providers and Web specialists. Sometimes the longerterms prospect of paying staff members high salaries to stay on top of technical ad"Unless you are a Fortune 1,000 company, it doesn't make sense to do it in-house — unless you have only the most basic laternet presence," Jenkins says. He recommends looking at solutions that integrate all communications issues. "Many compaties want one-stop-shopping for network maintenance, access and a Web presence, and more and more of the local and long-

distance carriers are offering those services," be says. more than just the internet, says Traci Bair, twork analyst at International Data Corp. in Framingham, Mass. But she offers two cavests. First, hiring an outsider doesn't mean you can divorce yourself from the process: You must still be ready to provide active oversight, she says. Second, it may be a mistake to reserve outsourcing only for midsize and smaller companies, she says. The decision of whether or not to out source should be based on a complete look at whether the capability is crucial to keep or simply a source of headaches. Bair advines "picking a peer-size provid-

er" so that your needs match its cambilities

and you "don't fall through the cracks."

Texas the decision down even further, suggests Dusside Derx, an internet consultant and head of Dera Amoutates in Newson, Mans. For companies with good IS capabilities, it might make sense to hire only part of the problem, such as mailing lot administration or server configuration. Tim Steam, director of messaging at Aberdeen Group, Inc. in Booto, says it all both down to the same rules of thumb your configuration. The configuration of the config

and what is mission-critical.

Using that formula, most firms will achieve happiness just by concentrating or Web content and passing implementation

and upkeep concerns to others, he says.

The next level of choice involves geography. Despite the Internet's capability for making location a nonsister, Stone advises firms to choose nearly Internet service providers and outsourcers so the subtle issues of control can be handled effectively.

Adequate oversight in also related to security, a preceived matching black to outsooring that Slame feels on the addressed emisy. The most critical issues for companies in still physical security for facilities), foltowed by ensuring that employees confortion security procedures. Steame says. The insury companies sovery about the internationary companies source about the business section as employees, be says, if our and business and againers are in place and business and againers are in place—

Still, Dern likens putting a company on the Web to "knacking a 16-foot hole in the side of your building."

You need to have a way to keep the

"You need to have a way to keep the burns out," he says. There with a good outsourcer, you have to make sure that if someone breaks in to the Web server, they can't also get into your main system. **

Barks in a freelance writer in Franklin, Mass.

Get Web feet without getting soaked

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Bong Garlach field) and Joa Craig (right), both emitter investment ab outerans, help run Web pites that provide tips on starting new clade

By Rosemary Cafferso

or investors who want to hang out online but find big forus a little overwhelming, there's a more low-key alternative that's gaining mo line investment clubs. An online investment club is essentially an electronic ver-

sion of the old investment clubs to which your parents may have belonged. The idea is to bring together a-small group of investors — typically fewer than 20 - who meet regularly to discuss the stock market and make group investments.

Frequently, these clubs manage stock portfolios well below \$100,000, with individuals kicking in as little as \$20 per month. Online clubs operate on the same basic premise, but they do business electronically.

Some groups, such as the Pioneer Online Investment Club (POLIC). which has a forum on CompuServe, conduct all business online - including meetings and stock votes. Other clubs continue to meet in person but now use World Wide Web sites to post club information and provide links to educational resources

The real advantage is we've got peoole all over the world with extremely different points of views and perspectives on investing," says Joe Craig, a founding member of POLIC and director of the computer group at the National Association of Investors Corp. (NAIC). You wouldn't get that if you started a

club with people from church or work." Because many of these organizations are private, they are difficult to track. But industry observers say the number of clubs is growing rapidly and there are likely hundreds of clubs using the later-

"In the last year, there's been at least a couple dozen new ones," says Doug Gerlach, editor of the NAIC's Web size (www.better-investing.org). Gerlach also maintains his own Web site on investing (www.investorama.com), which was set up in part to help investors esta their own online clubs. His site includes links to more than a dozen clubs.

Online bonding
The benefit of the online club approa is that it offers inventors an opportunity to learn about the stock market and make money with a group of peers. Also, it can be less intimidating than dealing with a professional broker and can offer cameraderie and triendship. which investors may have trouble find ing on the big forums.

As an example, the Manifest Investors started out as a Chicago-based club whose members met in person on a monthly basis. It continues those meetings but now relies beavily on the Inter net to post club information, includi

A key reason for the shift was to hang on to members who were relocating out of the Chicago area, says Mark Robertson, the club's president. The group now includes six remote

Of course, a possible downside to on line clubs is the potential for traud. Unless investors check out a club and new members carefully, they could wind up with a bad deal on their hands. Industry ervers say they have not yet heard of a fraudulent online club. Yet the

NAIC and other industry experts warn investors to be careful. The internet enables dishonest people to take your money much more rap-

idly than before," says Barry Murp an NAIC spokesman. "So our position is to make sure you know who you are

Be prudent Cub veterans say inves

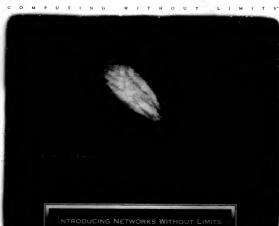
ply use common sense when evaluati clubs or new members. The NAIC is shibited from recommending specific ba, but it does provide guidelines on uching a club, including how to off-lly install officers, incorporate and handle financial reporting for tax our

stry observers say inve should seek out groups that put up a few hurdles for new members. That shows the chib is careful about screening applicants. POLIC, for example, requires that people serve an apprentice ship of several months before being voted into the club. During that time, the apprentice must help analyze a com pany for investment potential.

Another uption to consider is getting some protection for the chub. As an NAIC member, a club can apply for a bond that would protect the first \$50,000 of a portfolio should an unicrupulous member steal funds.

And for long-term success, club vei erans my to make sure the club's investment philosophy is nimitar to your own. Some clubs are made up of active traders, while others are far more conservative and hold stocks for long periods.

"You will be pooling money togeth-er," says John Sarnese, a member of The Mint Collectors, an online club with roots in the Philadelphia area. You don't want a mix of people with longand short-term goals.



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The Week in Stocks



Industry Almanac

Manugistics turnaround

Manufastics Group, Inc. (Nandaq:MANU) was the investment world's upy duckling a year ago. Wall Street showed linkinterest in the supply-chain management software developer. Recently, though, Manufastics has been transformed.

Supply-chain management software lets companies plan production and distribution of products based on analysis forecasts. It combines data from each level of the supply chain and lets managers drill in to each supect to optimize returns. Analysts say Mamagistics had a hole in its product line, which it plugged in May by buying Avy, Inc. and its production man

it plugged in May by buying Avyx, Inc. and its production management software. Competitions were taking advantage of the gap in Manugistics' product line to siphon off customers. "Investors have finally started to reducorer Manugistics," says Jim Duggan, an analyst at First Albury Corp. in Stamford.

Duggen says one that Managistics has plugged its product hole. It has put together several good quarters in a very some market sector. "That's because manufacturers are starring to understand that although the software can cost between \$500,000 and \$1 million, it pays for itself almost immediately, he says. Recet partnerships with Oracle Copy, and \$AP AG have also helped boots Managistics' image and stock given.

The recent run-up in Manuginties' stock price was also a result of PeopleSoft, Inc.'s acquisition of Manuginties coingestion Red Pepper Software Co. Wall Street speculated on whether more acquisitions might take place in the sector, Duggus says, but none did. — Strauert Duck



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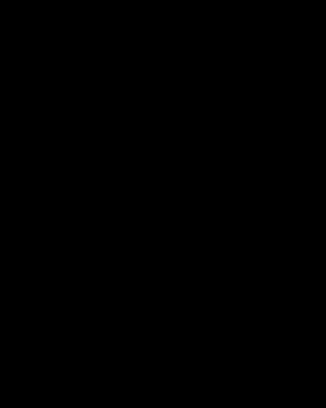
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Industry Almanac

Manugistics turnaround

gistics Group, Inc. (Nasdag:MANU) was the invest ment world's ugly duckling a year ago. Wall Street showed little interest in the supply-chain management software developer. Recently, though, Manugletics has been transformed Supply-chain management software lets communies plan ons-

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Duggan says now that Manugistics has plugged its product hole, it 'has put together several good quarters in a very good market sector." That's because manufacturers are starting to understand that although the software can cost between 8300,000 and \$1 million, it pays for itself almost immediately, he says. Recent partnerships with Oracle Corp. and SAP AG have also helped boost Manugistics' image and stock price.

The recent run-up in Manugistics' stock price was also a result of PeopleSoft, Inc.'s acquisition of Managistics competitoe Red Pepper Software Co. Wall Street speculated on whether more acquisitions might take place in the sector. Durgon says. but none did -Street Check

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THE REPORT OF THE PROPERTY OF

56K modems on tap for 1997

CONTINUED FROM PAGE 1 usage charges

Such modems could cut into the limited use of Integrated Services Digital Network (ISDN), Although ISDN lines offer 128K bit/sec. of bandwidth, the service isn't offered widely outside major metropolitan areas because it is difficult to order, provision and install.

But one user questioned whether regular ana log lines can handle data at 56K bit/sec "We've done extensive testing of teleph quality and found that once we go off campus, we can rarely push 28.8K bits of data over an analog line," said Bob Currier, director of network communications at Dake University in Durham, N.C. "The quality of the lines needed would be high,"



Rockwell, in Newport Beach, Calif., wouldn't address that issue because it isn't shipping the product yet. Users could use the S6K bit/sec, moderns with higher-quality digital lines if problems arose with

analog lines, though that would cost users more, This [modern] technology sounds like it's got

major potential and could prove to be tough competition for ISDN," said Maralyn Rosenblatt, vice president of client services at Countrywide Home Loans in Simi Valley, Calif. "I'm in the process of writing a telecommuting policy and seeing faster moderns as an enabler for remote access. They'd also facilitate more efficient mobile computing.

Rockwell isn't alone in its development of faster odem technology.

"Today's 33.6 [K bit/sec.] certainly isn't the fastest apeed for moderns," said a spokeswoman for U.S. Robotics Corp. in Skokie, Ill. "We're looking at higher speeds, but we're not ready to ance anything yet."

A Rockwell spokeswoman wouldn't speculate about the price of S6K bit/sec. moderns once they become available or whether existing moderns

could be upgraded to support the higher speed. Pricing for 33.6K bit/sec, modems varies by model and features required. U.S. Robotics charges about \$300 to \$700 for the units; ISDN support costs an additional \$100, according to the spokes'net crunch CONTINUED FROM PAGE 1

domly contacted last week reported escalating problems across the country, including lost connections, dead circuits, electronic-mail delivery failures and

ger-than-usual waiting periods onli Many people reporting problems were mers of service providers Sprint Link, Netcom Online Communication Services, Inc. or PSlort, Inc. or small providers. Some of those interviewed pointed at router troubles within Sprin

Corp.'s SprintLink network and traffic concession at super hobs in northern Virginia and California. The Virginia hub, Metropolitan Area Excha (MAE) Point East, is the merger point for 46 minor internet service providers. That makes it the busiest public ex-

change on the interset Jeffry Dwight, president of Greywo cts, an late tancy in Plano, Texas, said MAE East and

MAE West in California have been down a couple of times in the past week. He described a scenario "where MAE East gets overloaded, things go down and things get routed through MAE West [Then MAE West] goes down, and usual ly by that time MAE East is up again." The nagging problem, analy

said, is that there is no way to pin down the exact source of this latest race of a slowdown, which is expected to worsen if the big carriers don't keep up with large-scale backbone up ides. Upgrades are under way at MCI Communications Corp. and Sprint.

Also considered ker to controlling tra Sc by siene critics is setting stricter usage-based fees to restrict unlimited access enabled through flat monthly fees. Sprint has land Jacolated congestion

problems" at network exchange poi ere access to trunks is shared with r providers, said Brad Holamp Sprint's director of data product mana ment. Sprint is working with MCL whi

eres many of its lines, to solve the Chris Walsh, director of esq UltraNet Communications, Inc., a Mari-boro, Mass., Internet service provider that has 25,000 customers, said the corn sy's Sprint circuit went down for 12

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ions of the or with pery ers at each interset service provider, an

en one of the major network sines down, there has d

"During the last couple of days, we'w oticed serious problems that have caused us inconvenience," Walsh said. The company used another carrier's lines as a backup, though, he added.

Walsh speculated that thousands of idents returning to school could be agging the backbone. For example UltraNet made a deal with Berklee Coi lege of Music in Boston, which will bring 3,000 more students on to the World Wide Web, Walsh said

But several internet watchers, includ ing Garry Ray, an Internet analyst in North Conway, N.H., said the problem is much bigger than student truffic or an isolated router outage threats" such as the year 2000 bugs.

"Nobody's sponsoring it," said Joe

who chairs The Information Manager-

ment Forum's working group on year

2000 issues. "The perception in business

is ... there's no additional benefit to the

corporation. It's just money down a

hole." The rule change only "makes it a

managers to sell, be said.

ore onerous business proposition" for

"This is far beyond a SprintLink prob-lem," Ray said. Performance has turned "two to three times worse" throughout

the country, be claimed. Ray, who uses Net Express in Bethel, Maine, an a provider, said he has had a lot of E-mail bounce back to him, has had problems using Yaboo, Inc.'s search engine and keeps loning his connection. Us-ing Traceroute, a tool that measures how long it takes to move a packet of data from a high-volume router, Ray reported problems with 20 major routers.

Jeff Pulver, an independent Internet analyst, also reported consistent probless with his connection, supplied by PSInct, and said they have escalated in the past several weeks.

Pulver, an Internet phone user, said the carriers need to re-examine how they route calls, which he believes causes many problems. Data sent free miles away from his Great Neck, N.Y., home, for instance, makes 14 hops an it travels through Washington, San. Francisco. shington again and New York before

it returns to Long Island. Nate Zeinick, an analyst at Meckler-Media in Westport, Conn., said that compacy experienced several major setwork connection outages recently that brought them-"down for hours during a

busy workday." The cause? "We can't tell whether one department [launched] their Pointcost at

ody ran a backhoe over an MCI link," be said But Alan Tatiel, vice president of sales and marketing at Internet service provid-

er UUnet Technologies, Inc., said the firm hasn't noticed any problems of late. "I always get my dander up a little bit whenever there are generalizations about the Internet," he said. "What's haping in one part of the Internet is not

sarily what's happening in other parts of the laternet. Year 2000 Advisory Services at Ma

ment Support Technology Corp. in Framingham, Mass. "At what stage do you have to disclose this to your shareholders? Do the auditors have to get involved. asking questions about just how big your year 2000 problem is? The issues go beyond fundi

counting rules, according to Jeff linnett. an attorney at LeBorof, Lamb, Greene & MacRae, a law firm in New York, In a recent report, he warned that corporate directors could be liable to shareholde lawsuits if they failed to fix year 2000. problems or falled to disclose them

IS managers "should be sending tho ands of articles" about the year 2000 is sue to their business must managers are still balking at the price of year 2000 work, said William Bern, a vice president at The Equitable Life Assurance Society in New York, which is well

Year 2000

CONTINUED FROM PAGE 1

information wrstems and business exec-

A recent survey of 161 organ that are members of the Society for Infor mation Management painted a depressing picture of how blind many buti sagers still are to the problem. IS managers reported that CEOs, internal ors, boards of directors and corpo rate leval departments had the least

awareness of the year 2000 issue IS "has not been doing its job and get ting this information to the boardroom said Peter DeJager, an independent contant on year 2000 issues who is based in Toronto. That is a serious conjection because directors "have the legal, and even the personal, responsibility to make sure organization is protected from

At issue is a July ruling by the Finan Accounting Standards Board (FASB), which sets the accounting pracces that most major corporations use The FASE ruled that companies can't amortize year 2000 work as a capital ex-pense, which would allow them to suread

the impact on profits over many years. In nd, companies will have to deduc ose costs from their earnings in the oparter in which the work is done. This means a material hit on curr gs, land) that has all sorts of rionic el cts," said Lebrad Freeman, director of

Performed occurage good on frameworks of Computerments, Na. Boundard good first first serve for Computerments, Na. addisorable good first serve, you is Jose France, on Anton, Wich, Computerments, No. for Exercise, additions, water registered and



along on its year 2000 work.





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First, a confession: Two years ago I would have been in the cheering section for such a merger. I was a big proponent of Novell buying WordPerfect, and I even thought Novell

should lift Borland from its morass. But big mergers don't work these days, at least not very often. They certainly don't work when one of the partners is in deep trouble, as Novell is, and the other can hardly manage the amount of business it already has. It would be a dumb deal from a competitive viewpoint because it would be too easy to do the wrong thing with Netvell. Novscape or whatever they might call it. Such a company would be tempted to throw itself into a frontal assault on Microsoft, Ray Noorda tried that at Novell once before, as did Iim Manzi at Lotus and Philippe Kahn at Borland. Novell has done best at what Micro-

soft warn't very good at doing. That used to be file management and printing, and it may be directory services in the fature. Netscape may also find tech nologies or markets that Microsoft doesn't deal with to be very profushle. But Netscape can't survive without in

ing Microsoft to do a few things its way A friend of mine has been involved in aikido, a martial art played with big sticks. The sticks are called bokken, and they are used only defensively. The goal, when someone brings down a 6foot wooden sword on you, is to not be where the sword is. Novel has always done its best work not by competing

riges - doing the things Microsoft doesn't do well.

ket of its own. That's the hit-and-run strategy, in which Netscape confronts Microsoft where it must and then tries to whisk its mera off to safety ty for Netscape, that is

Then there's Netscape's parallel strategy, the one fought by lawyers. In a letter to the Justice Department last th. Netscape accused Microsoft of ng muscle to get hardware OEMs to package Internet Explorer instead of Netscape's Navigator. The letter made

adlines, but so far there's been little ly not when the problems of one could Wire? Because Netscape is unlikely to get any real industry support in its me-dia way with Microsoft Consider. Netscape cited Hitachi as a company that had been muscled by Microsoft. Yet nobody at Hitachi seemed to know any

This means Netscape had better plan on going this one alone. It will be diff-As for Netscape, it has to do some cult, if not impossible, for Netscape to ings better than Microsoft to create a get anyone to join its anti-Microsoft chorus. Worse, custos

don't really care what Mi crosoft does to the compo tition as long as it con mes making software they want to buy So here's my advice: Il

Netscape wants to sue Mi crosoft, it should do so Otherwise, shut up. Novell and Netscape should work together all they want. Even a debilitated Novell can be a powerful ally. But they shouldn't give any thought to a merger. Maybe they should consider it some day when they're both big and strong, but certain

be the death of the other. Coursey's an industry analyst, consultant and editor in chief of "coursey.com," an ooline newsletter at www.coursey.com. His . E-mail address is devid@coursey.com.

Novell: Deal or get trumped

etWare is in danger of being trumped by Windows NT. But John Young, Novell's new president, has one last card he can play before giving up the game to Microsoft Novell Directory Services (NDS). Without NDS. NetWare would soon be history, mute

testimony to where Ray Noorda's "co-opetition" without competitiveness can lead you.

NDS gives Novell a lead over Microsoft in network design and administration. With NDS, a network administrator can establish as many workgroups as needed, assign fine grades of privileges and enforce uniform security policies. NDS allows centralized administration. It gives a central supervisor power

NT on the other hand, is better suited for decentralized operations.

Hoder NDS there's always a supervisor for the supervisors, and this leads to a clear chain of command and line of accountability. Under NT, it's possible for all network administrators to be equal. with all the attendant confusion.

If you want centralized man under NT, one of the few ways to get it is to organize the enterprise as one master domain, with all users logging in to one central server. But doing so defeats the see of having easy-to-maintain set work segments. So NT rectains a distributed - let's say frages each to the enterprise.

Under NDS, a general can give narching orders. Under NT, no captain can be sure what his fellow officers are doing at any time. Until NT gets a cen tral directory into next year. Novell has a big advantage in the marketplace. So, John Young, seize the day. M it clear that Novell's commitment to TCP/IP is on a par with IPX, and trumpet NetWare's superior directory. There's no reason why Novell can't supply Windows NT with what it needs if you can make the port fast enough

Once Novell does that, its directory gies to look like an industry standard of NetWare begins to look like a piece of the in road to the future, and the

peaking of net PCs, those who believe the network PC is dead on rival should watch seely as Pinkerton Security Services

me is ower

The Encino, Calif., firm is testing a to convert an NT server into a bost

for 15 low-cost desktops. The movewhich backs back to dumb terminals at tached to minicomputers, could save kerton "several million dollars" in dware and system maintenance s says Linda Bennett, IT director.

schedules security guards in 180 offices worldwide using applications displion dumb terminals that are rud by Mot-

Pinkerton is testing Citrix System WinFrame running on NT and display ing applications on winds - ing terminals, such as t

available from Wyse Tech nologies, or diskless netemerge from IBM. So 286 and 386 PCs that have been serving as doorstops at Pinkerton could even get hoisted back onto desktoos

Piokerton is a case where few employees are knowledge workers who need a fully loaded PC. But others may find that a "smart" terminal attached to a server can handle many of their dis-

tributed, routine tasks as well. Bahcock is Computermental's technical editor His Internet address is charles_bahcock®

(PPE Computerwold com) SEPTEMBER 16, 1996 COMPUTERWORLD



ng trouble writing that business plan, press release or

me page? For inspiration, try popping this address in you Web browser: www.athenanow.com/cgi-bin/engine.cgi. The Web page generates a fictitious company profile assembled from random words and phrases. The profile includes the ever-present mission statement, produ phies and vacuous quotes. Every time you reload the page, you get another randomly generated company profile. Here le excerpts: are some samp

are some sample excerpor.

Our goals: Interactive Vaporware Architects was founded on the belief that delivering full-motion video over ordinary telephone lines can be accomplished through a multimedia. rehensive tool set that is not only robust, but also easy

to use and, above all, industry-leading. Our people: Cunningham C. Kopalowski, chief technology officer. Mr. Kopalowski came to International Technology Designs in 1988 fresh from the Buffalo Bills offensive line. His No. 1 tank: designing, from the top down, a corporate metaohor that is scalable, multimedia and robust.

fuctors in Supremale Calif has unveiled a complex programmable logic de rice to boost speed and cut power con in notebook computers. The device uses to little mergy, it can run on a 3-colt grapefruit battery





Software 'tortured' during testing, PETS claims whole lives on dirty, ill-

Victims cooped up in tiny rooms

NEW YORK - People for Ethical Treatment of Software (PETS) appounced today that more software con have been added to the group's watch list of compa es that regularly practice

There is no need for soft ware to be mistreated in this way so that companies like ese can market new prod urte " said Ken Grandola, a spokesman for PETS 'Alternative methods of testing these products are avail

According to PETS, these ergo lengthy and ards ts - often without rest - for ers or days at a time. Emoyees are assigned to "break" the software by any eass necessary, and inside ces report that they often inke about "torturing" the soft

"It's no joke," Grandols said. "Innoceot programs. from the day they are compiled, are cooped up in tioy rooms and 'crashed' for hours go end. They spend their

maintained computers, and they are uncommunicatly deleted when they're not needed Grandols said the software is level in necessitary conditions and is infested with

We know that alterna to this horror exist," be said, citing industry giant Microsoft Corp. as a company that has become successful without resorting to software

- Original author unknown. Contributed by Joe Warres. Burlingame, Calif.

Banking dinosaurs bite back When IBM and 15 banks launched the Integrion Fin

cial Network last week, several bankers lashed out at Microsoft Chairman Bill Gates. In a speech be made a few years ago, Gates called bankers "dinosaurs." That rentark still rankles the old guard. "If we are, in fact, 'dinose then a new breed" of bankers are being created through grion, said Robert Gillespie, president and CEO of KeyCorp in Cleveland.

Did they come with Windows?

sking of Gates, the Microsoft honcho recently shot the best low net score at a charity golf event in Seattle The tourney was sponsored by home products manufac-turer Wayne-Dakon Corp. and Richard Karn, a.k.a. "Al" on the comedy TV show Home Improvement. Gates woo Wayne-Dalton garage doors, which prempted Karn to uip. "He's got what, a 36-car garage?"

Lotus to get in on Net.Action

Sources say Lotus is ready to ship Net.Action, the first of its Internet applications. Net.Action, which is built on Lo-tus' Domino Web/Notes server, lets users quickly create Internet or intranet World Wide Web pages via Hypertest Markup Language templates. Net.Action also will ship as part of Notes 4.5 this war

Jewish Day of Cyberatonement

One of the largest Jewish houses of worship in the world, the Reform congregation Temple Emanu-El in New York, will let Internet surfers access Rosh Hashana and Yom Kippur services via the synagogue's World Wide Web site (www.emanuelayc.org). Yom Kippur services start at noon Sept. 23 and run for shout 18 hours. The "netcast" is uced by WebSine, Inc. (www.websine.com), a New York firm that also produced Temple Emanu-ETs Cyber-Seder during the spring holiday of Passover.

Apple takes Big Easy way out Apple Computer is mining the bayous for new product names. The company has renamed its Meta Content For-

mat (MCF) and Project X3-D browser plug-ins. Rather than choose moniters that play off the overused puns for Java and coffee, the Cupertino, Calif., computer maker has gone Caiun. Project X will be renamed HotSauce, and MCF will be called HotSwace MCF. Let's hope a niew of had Cajun puns aren't on the way. Otherwise, the Paul Prudhomme plug-ins, the ctouffee interface and the crawfish command bur can't be far behind.

AOL's Walsh melts ICE audience America Online's Mark Walsh was a quip machine at the

Internet Commerce Expo conference last week. He described Notes as being "like every button on your VCR: You know they do wonderful things, but you never use them." And he joked at AOL's expense, too: "We had a 19hour ontage a few weeks ago. Our 2400-baud customers thought it was normal response time.

Microsoft Corp. and Folio Corp. recently mailed out invito tions to a press conference and included a fresh, new dollar bill in the envelope. Journalistic ethics would'be required as to return the payole - and huffly, too. But, to our shame, we kept it - at least until the following weekend when we gave the dollar bill (OK, maybe it was a different dollar bill) to a cheroot-moking penhandler in a wheelchair. No doubt the panhandler will go on to influence a corporation to spend millions on Microsoft and Folio products, thus pro-ing the companies' marketing investment to be well-epent. If you have news for Computer world, send it to News editor Patricia Keefe at patricia bedellou.com, or call her at (508) 820-8183. The good news is you don't have to give us a dollar. The bad news is we won't give you a dollar either.

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